FEBRUARY 8, 1960

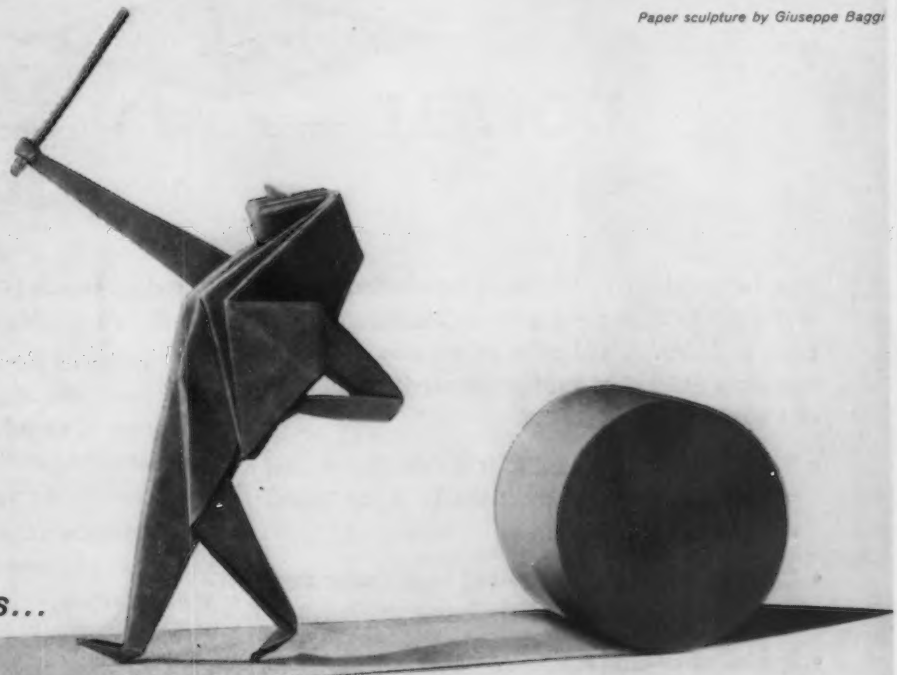
PAPER TRADE JOURNAL

CANADIAN INDUSTRY MEETING HIGHLIGHTS . . .

- New technological developments
- Soviet pulp and paper industry
- Election of CPPA executives
- What the Canadian pulp and paper industry did in 1959

Editorial Dept.
University Microfilms, Inc.
313 N. First St.
Ann Arbor, Mich.

Paper sculpture by Giuseppe Baggi



Pulp from Gottesman means...

EXPERIENCE!

Bleached and Unbleached Sulphite • Bleached Hardwood • Groundwood
Bleached, Semi-Bleached, and Unbleached Kraft

Established 1886
THE GOTTESMAN ORGANIZATION

Gottesman & Company, Inc. • Central National Corporation
Central National Commercial Company, Inc.
100 Park Avenue, New York 17, N. Y.

Gottesman & Company Aktiebolag, Stockholm, Sweden • Central National-Gottesman Limited, London, England • Representatives in 55 Leading World Markets

ANNOUNCING A NEW ORGANIZATION:

DOW INDUSTRIAL SERVICE

DIVISION OF THE DOW CHEMICAL COMPANY

formed to offer the CHEMICAL CLEANING SERVICES

formerly provided by

DOWELL

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

Dow Industrial Service will be an organization devoted exclusively to helping you solve maintenance and disposal problems. It will offer an expanded scope of operations designed to be of greater service to all types of industry.

- The new organization will offer the cleaning services proved in plants throughout the U. S. by Dowell during the past 20 years.
- Chemical cleaning personnel will be the same engineers and operators you have known in Dowell.
- Specialized cleaning equipment will be provided from the same stations and offices — located in major industrial areas.
- The research program which has provided many major advances in cleaning techniques and chemicals will be continued — and expanded.

Dow Industrial Service will welcome the opportunity to discuss your cleaning problems on all kinds of equipment in all industries—steam generators, process equipment, heat exchangers, towers, water and product lines, water wells and tanks.

The new organization will also offer consulting services, and a line of chemical products for use in water and waste treatment.

Dowell will continue to offer services and products to the drilling and producing segments of the oil industry.

For service or more information call the office or station near you. Or write Dow Industrial Service, 20575 Center Ridge Road, Cleveland 16, Ohio.

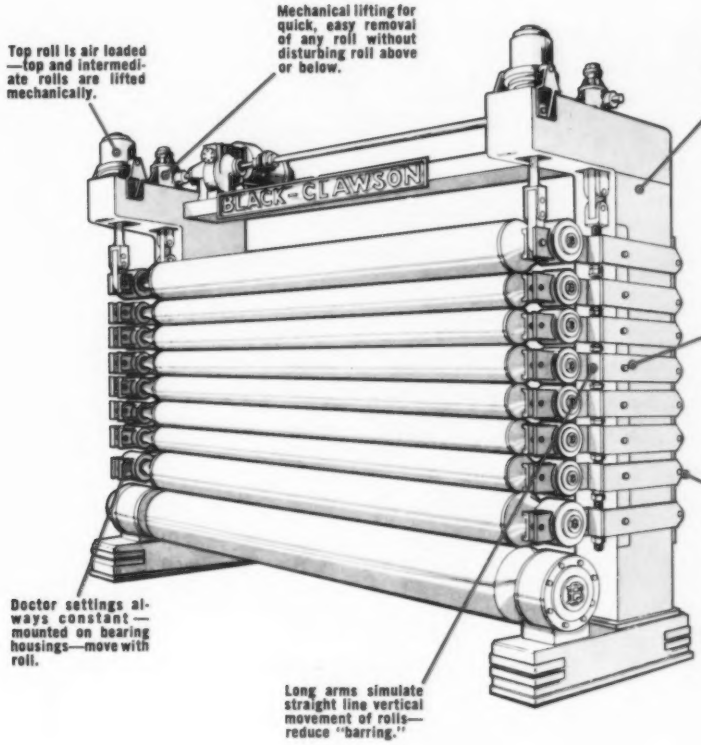
Chemical Cleaning Services for all industry

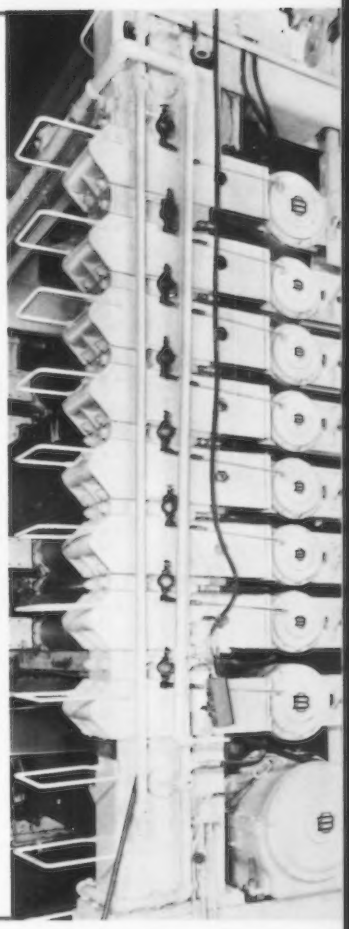
DOW INDUSTRIAL SERVICE

DIVISION OF THE DOW CHEMICAL COMPANY

DOW

Advanced Design Open Side Calender


Mechanical lifting for quick, easy removal of any roll without disturbing roll above or below.
Top roll is air loaded —top and intermediate rolls are lifted mechanically.
Solid box framing for rigidity and vibration dampening.
BLACK-CLAWSON
Stabilizing points on arms keep rolls from shifting right or left.
Adjustable arm pivot points insure correct roll alignment.
Doctor settings always constant — mounted on bearing housings—move with roll.
Long arms simulate straight line vertical movement of rolls—reduce "barring."



A papermaker interested in a modern calender that is easy to operate and maintain will instantly recognize and appreciate the superior design features of this open side calender.

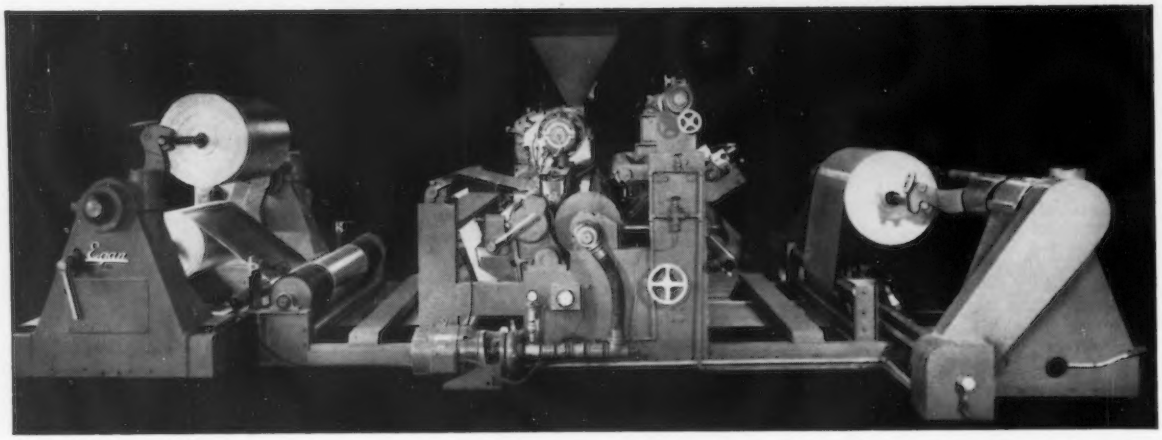
This modern open side calender is part of Black-Clawson's comprehensive advanced design standardization program for all paper machine components. Used as single or double stacks, this rugged calender stack is built in three basic sizes to suit large, medium or small machine requirements. Plan now to learn more about it. Call or write...

The Black-Clawson Company
Paper Machine Division, Watertown, N. Y.

Another Advanced Engineering Design

BLACK-CLAWSON

why an Egan extrusion coater?



One minute's reading time tells you why!

Above unit installed at Protective Coatings Corporation, Clifton, New Jersey

Egan is the world's leading manufacturer of extrusion coating equipment. Eighty-five percent of all companies operating extrusion coater-laminators rely on Egan field-tested equipment.

The extruder itself is a proven, dependable, high-capacity, low maintenance unit. Barrel thickness is calculated for optimum heat transfer. Inexpensive high watt-density ceramic resistance heater bands provide fast heat-up, and *improve* your plant's power factor (ceramic heater bands are economical to buy *and* operate).

The center fed, single piece die minimizes dead storage areas and leakage. Rectangular construction lends itself to more even heating without warpage. Standard or extended die jaw designs are available.

Critical parts of the extruder and die are precision manufactured to close tolerances, permitting accurate gauge control and production of thinner films.

A specially designed double-shell internal spiral chill roll, furnished with mirror or matte finish, assures maximum heat transfer rates for cooling the laminate uniformly (less than 2° F differential across roll). It further permits use of smaller diameter cooling rolls which reduces trim losses, the largest single factor in production waste.

Various laminator designs can be furnished, depending upon the substrate to be handled. Open construction of the laminator permits maximum access and visibility by the operator.

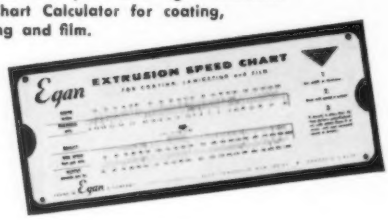
Packaged water circulating and trim disposal systems are also provided.

In addition, patented horizontal and vertical adjustments of the laminating nip, which are essential for obtaining maximum adhesion, are included.

A variety of unwinds and winders can be furnished, depending upon individual requirements (from hand-splice operations to automatic flying splice and flying transfer equipment).

In short, Egan gives you the complete machine package, manufacturing both the extruder and the web handling equipment.

FREE Write for your free Egan Extrusion Speed Chart Calculator for coating, laminating and film.



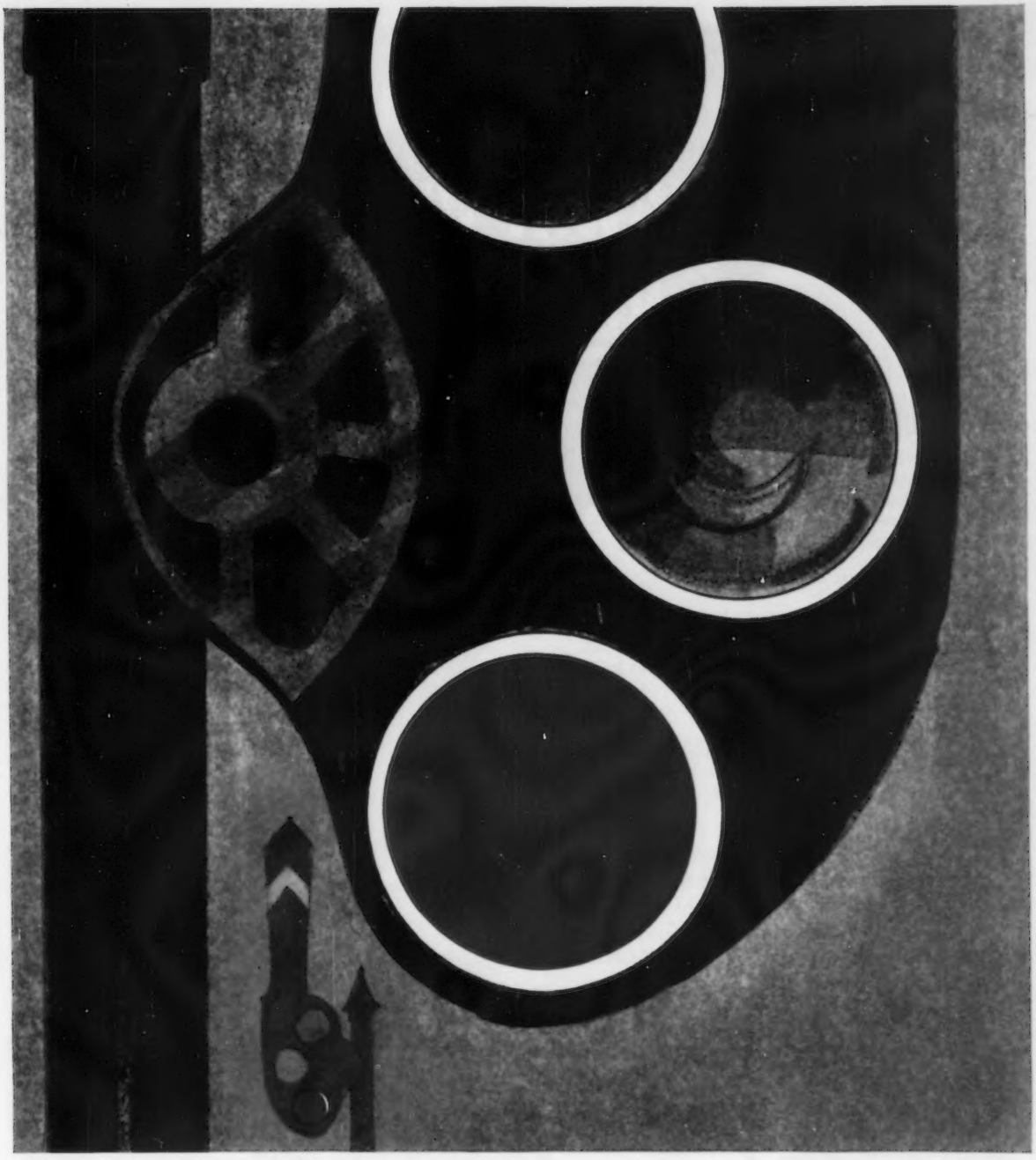
Egan **FRANK W. EGAN & COMPANY**

SOMERVILLE, NEW JERSEY CABLE ADDRESS: EGANCO—SOMERVILLE (NJER)

Manufacturers of machinery for the paper converting and plastics industries

PAPER-coaters, laminators, treaters, gummers, saturators, embossers, unrolls, rerolls, drying systems, other components; **PLASTICS**-extruders, dies, take-offs, other accessories.

REPRESENTATIVES: MEXICO, D.F.—M.H. GOTTFRIED, AVENIDA 16 DE SEPTIEMBRE, JAPAN—CHUGAI BOYEKI CO., TOKYO. LICENSEES: GREAT BRITAIN—BONE BROS. LTD., WEMBLEY, MIDDLESEX, FRANCE—ACHARD-PICARD, REMY & CIE, 36 RUE D'ENGHIEN X, PARIS, ITALY—EMANUEL & ING. LEO CAMPAGNANO, VIA BORROMEI 1 8/7, MILANO; GERMANY—ER-WE-PA, ERKRATH, BEI DUSSELDORF.



what have we done for you lately?

WHEN YOU HAVE A PROBLEM WITH PULP CHEMICALS, WE CAN HELP. WITH TRAFFIC, FOR EXAMPLE. Our traffic staff can work closely with yours to make sure that deliveries are made in a way to keep your inventories at a minimum without interrupting production schedules.

This cooperative effort in keeping inventories down has made it possible for our customers to save thousands of dollars in our more than fifty years of business with the pulp industry. Just ask when you want help.

The CAUSTIC SODA BUYER'S GUIDE is a compact source of information for anyone who buys or uses caustic soda. It gives full particulars on physical and chemical properties, shipping methods and containers, the economics of different strengths and grades, and the like. Write for a copy.

HOOKER CHEMICAL CORPORATION
1802 Forty-seventh Street, Niagara Falls, New York

Sales offices: Buffalo Chicago Detroit
Los Angeles New York Niagara Falls
Philadelphia Tacoma Worcester, Mass.
In Canada: Hooker Chemicals Limited, North Vancouver, B. C.

HOOKER CHEMICALS PLASTICS

HOW YARWAY BLOW-VALVES REDUCE DIGESTER OPERATING COSTS

Faster blow

Valve by valve comparisons show Yarway Seatless have up to 100% greater discharge area than some other digester blow valves of the same nominal pipe size. Result—faster discharge, lower pressure drop.

Cleaner blow

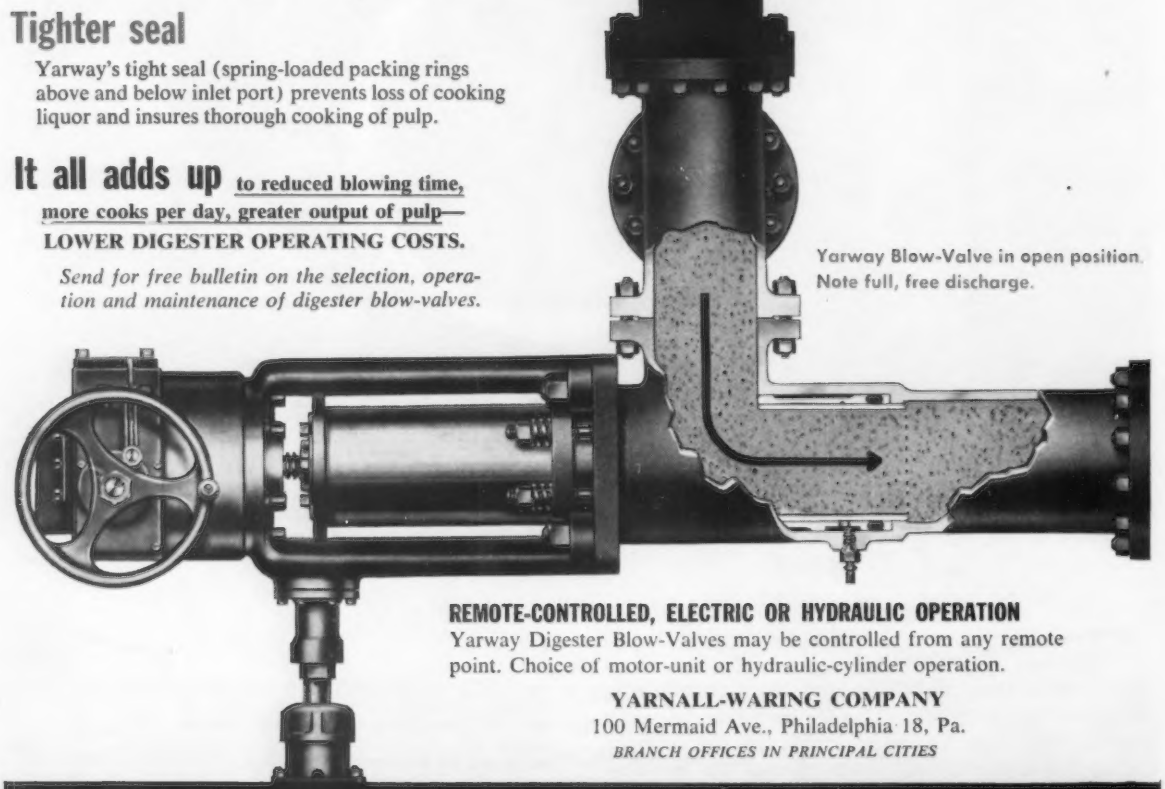
Steam purging is unnecessary since Yarway's seatless hollow-sliding-plunger design eliminates all pockets where wood chips or tramp metal can hang up.

Tighter seal

Yarway's tight seal (spring-loaded packing rings above and below inlet port) prevents loss of cooking liquor and insures thorough cooking of pulp.

It all adds up to reduced blowing time, more cooks per day, greater output of pulp—
LOWER DIGESTER OPERATING COSTS.

Send for free bulletin on the selection, operation and maintenance of digester blow-valves.



Yarway Blow-Valve in open position. Note full, free discharge.

REMOTE-CONTROLLED, ELECTRIC OR HYDRAULIC OPERATION
Yarway Digester Blow-Valves may be controlled from any remote point. Choice of motor-unit or hydraulic-cylinder operation.

YARNALL-WARING COMPANY
100 Mermaid Ave., Philadelphia 18, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY DIGESTER BLOW-VALVES

PAPER TRADE JOURNAL

PUBLISHED WEEKLY SINCE 1872

JOHN C. W. EVANS
Editor

PAUL D. VAN DERVEER
Associate Editor

R. E. THUEMMES
Associate Editor

HARRY L. DYER
Assistant Editor

K. E. PATTERSON
Assistant Editor

L. HAMEL
Production Editor

WM. N. PERRY
Staff Artist

LOCKWOOD TRADE JOURNAL CO., INC.
49 West 45th Street, New York 36.
Plaza 7-2370

GEORGE E. LOCKWOOD.....President and Treasurer
ARTHUR E. GORDON.....Vice President
FREDERICK E. WINKLER.....Secretary

Published by Lockwood Trade Journal Co., Inc., at 34 North Crystal St., East Stroudsburg, Pa. Second class postage paid at East Stroudsburg, Pa. Printed in U.S.A. Copyright 1959 by Lockwood Trade Journal Co., Inc. Paper established Feb. 17, 1899, combined with Paper Trade Journal Nov. 16, 1899. Paper established Sept. 21, 1910, combined with Paper Trade Journal February 19, 1926. All rights to the above titles reserved. Also publishers of Lockwood's Annual Directory of the Paper and Allied Trades.

Week of FEBRUARY 8, 1960—Vol. 144, No. 6

TRENDS 13
NEWS OF THE WEEK 15

FEATURE ARTICLES

Many Interesting Developments Reported at Canadian Technical Meeting 24

Soviet Pulp and Paper Industry 25

Canadian Industry Progresses, Faces Up to Economic Problems 34

PAPER PEOPLE 18
NEWS OF CONVERTERS 22
NEWS OF SUPPLIERS .. 37
ASSOCIATION NEWS ... 42
PRICES OF FIBERS 44
NEW EQUIPMENT & SUPPLIES 46
FIGURES OF THE WEEK 50
NEW LITERATURE 54
CLASSIFIED ADVERTISING 58
ADVERTISERS INDEX .. 62

REMEMBER THESE DATES

February 22-25. Paper Week in New York.

May 23-25. TAPPI Coating Conference, Edgewater Beach Hotel, Chicago, Ill.

June 14-16. TAPPI Bleaching Conference, Edgewater Beach Hotel, Chicago, Ill.

June 7-9. PIMA National Meeting, St. Francis Hotel, San Francisco, Calif.

SUBSCRIPTIONS →

Paper & Pulp Mills, Converters and their Personnel	1 yr.	2 yrs.	3 yrs.
United States and Canada ...	$5.00	$8.00	$10.00
Latin American Countries	15.00	25.00	30.00
All Other Countries	20.00	30.00	40.00

All companies or individuals not engaged in the manufacture of paper and pulp, or in the converting thereof; U.S.A. and Canadian price per year: $7.50

Single copy price of current issues:
North America 50c Foreign $1.00

R. E. BOETSCH Director of Circulation

PAPER TRADE JOURNAL—49 W. 45th St., N.Y. 36, N.Y.
Please enter a subscription with the mailing address as follows:
Name .....
Address .....
City ..... Zone.... State.....
If subscription is for an individual, please fill in:
Employer ..... City ..... State....
Position ..... Employer's Business.....
Amount $ ..... ☐ Bill Me ☐ Bill Company ☐ Check Attached

What's the best way to bleach cold caustic pulp...

TOWER or REFINER?

Let Du Pont—the producer of both hydrogen peroxide and sodium peroxide—help you make this key decision

You may save thousands of dollars in capital investment and chemical cost if you make the right choice between bleaching in a refiner or in a tower.

Du Pont has a thorough working knowledge of both systems and, as the producer of both sodium peroxide and hydrogen peroxide, can tell you which peroxide or combination of peroxides is best for you.

Du Pont technical men will work with you and the equipment manufacturer of your choice to obtain the best peroxide bleaching process for your cold caustic pulp. They may recommend refiner bleaching requiring a small investment for peroxide solution make-up equipment with possible brightness increases of up to 20 points . . . or if your operation calls for it, they may recommend tower bleaching. When combined with Du Pont's acidification process and a peroxide treatment, tower bleaching can increase brightness up to 35 points.

Add Du Pont's experience to your own, and you're sure to make the right choice. Call your Du Pont representative; he will be glad to discuss any bleaching problem you may have.

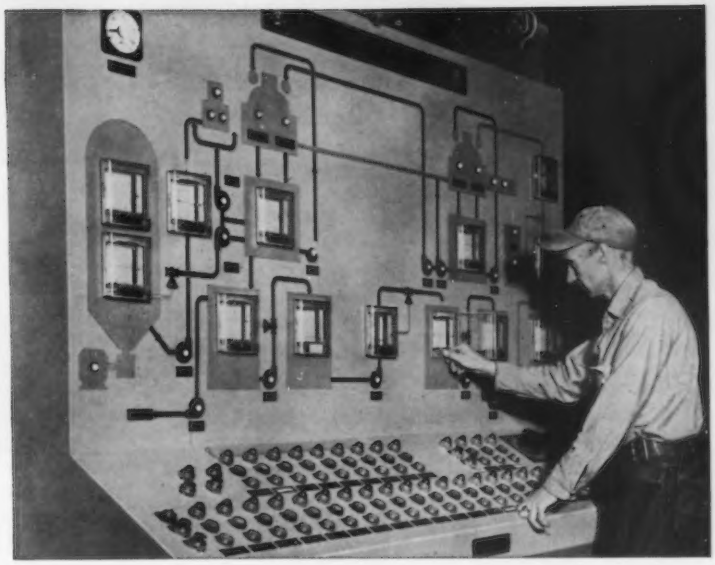
MIDWEST AREA
Call P. E. Kiefer, Chicago, Ill. • INdependence 3-7250
WEST COAST AREA
Call L. W. Blight, Portland, Ore. • CApitol 7-1281
NEW YORK & BOSTON AREA
Call C. R. Lombard, New York, N. Y. • LOngacre 3-6440
SOUTHERN AREA
Call R. W. Hammond, Charlotte, N. C. • FRanklin 5-5561

DU PONT PEROXIDES

SOLOZONE® sodium peroxide • **ALBONE®** hydrogen peroxide
for better bleaching of groundwood—sulfite—kraft—cold soda

DU PONT
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

ELECTROCHEMICALS DEPARTMENT, E. I. DU PONT DE NEMOURS & CO. (INC.), WILMINGTON 98, DELAWARE



HONEYWELL GRAPHIC PANEL controls the Dorr-Oliver washing system. The new mill was built for $7,000,000.

Honeywell controls help reduce cost of new Waldorf-Hoerner Paper Products Co. mill

With closely-knit, complete mill instrumentation, this revolutionary new pulp mill at Missoula, Montana, produces 250 tons of bleachable-grade kraft pulp per day, with a surprisingly small work force.

The brain child of Nels H. Sandberg, president of the Montana company, the entire mill features many processing innovations for efficient, profitable operation through automatic control.

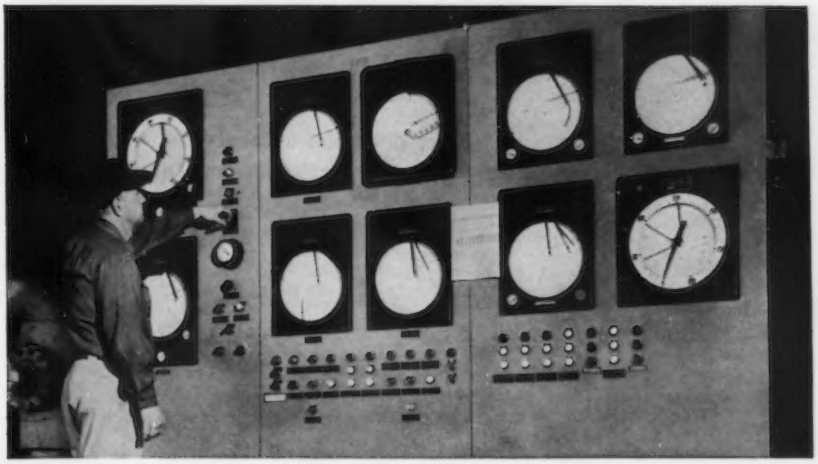
This is another example of how mill instrumentation, complete from concept to startup, pays daily dividends. Your nearby Honeywell field engineer can show you how to gain the advantages of instrumentation in your own mill. Call him today . . . he's as near as your phone.

MINNEAPOLIS-HONEYWELL, Wayne and Windrim Avenues, Philadelphia 44, Pa.

Honeywell

First in Control

SINCE 1885



HONEYWELL RECORDERS AND CONTROLLERS operate the digesters. The mill plans to produce 500 tons of pulp a day in 1960.

75th YEAR — PIONEERING THE FUTURE

C2®

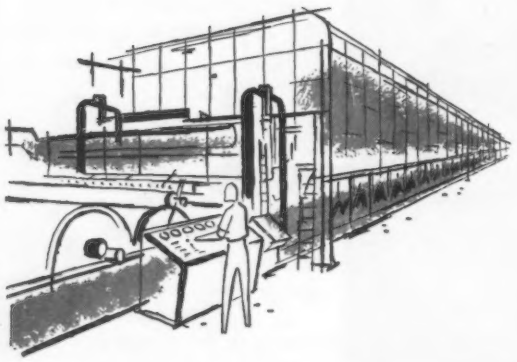
The New Slimicide

* non-toxic

* effective

* easy-to-use

* economical



A two year chronic toxicity study by the Medical College of Virginia indicates that C2 causes no toxicity problems within the recommended concentrations.

Up to one year experience in many mills demonstrates that C2 is an effective, low-cost slimicide for acidic white water systems. C2 treatment is free from taste and odor, and has no detrimental effects on dyes at the recommended use level. C2 does not cause foaming at the head box or darkening of the pulp.

C2, a sodium chlorite product, is readily soluble in water and is non-corrosive to equipment.

Average use level is 10 to 20 cents per ton of pulp. C2 is available in quantities ranging from one pound samples to 100 pound drums in truckloads and carloads. C2 also can be shipped as a 50% solution in tank cars or transports.

For assistance or further information, write the Sales Development Department, Baltimore 3, Md. Data sheet available upon request.

C2® is a trademark

6593

OLIN MATHIESON
CHEMICAL CORPORATION
Chemicals Division • Baltimore 3, Md.

Bauerite

PAYS OFF

Four mills* of the many using the Bauerite® process to make groundwood type pulp from chips are **doubling** their production. Wood economics often force mill owners to look for a substitute for their dwindling supply of softwoods.

Production advantages, new economies and greater profits are available with the Bauerite process. For instance, many have gained a constancy of quality superior to that possible with conventional groundwood. Slabs, edgings, certain sawdusts and chips of irregular size—in various blends and often from species of wood previously not suitable—are being used from local sources. These are some of the reasons why mills find this process profitable. Write, or ask your Bauer representative for complete information.

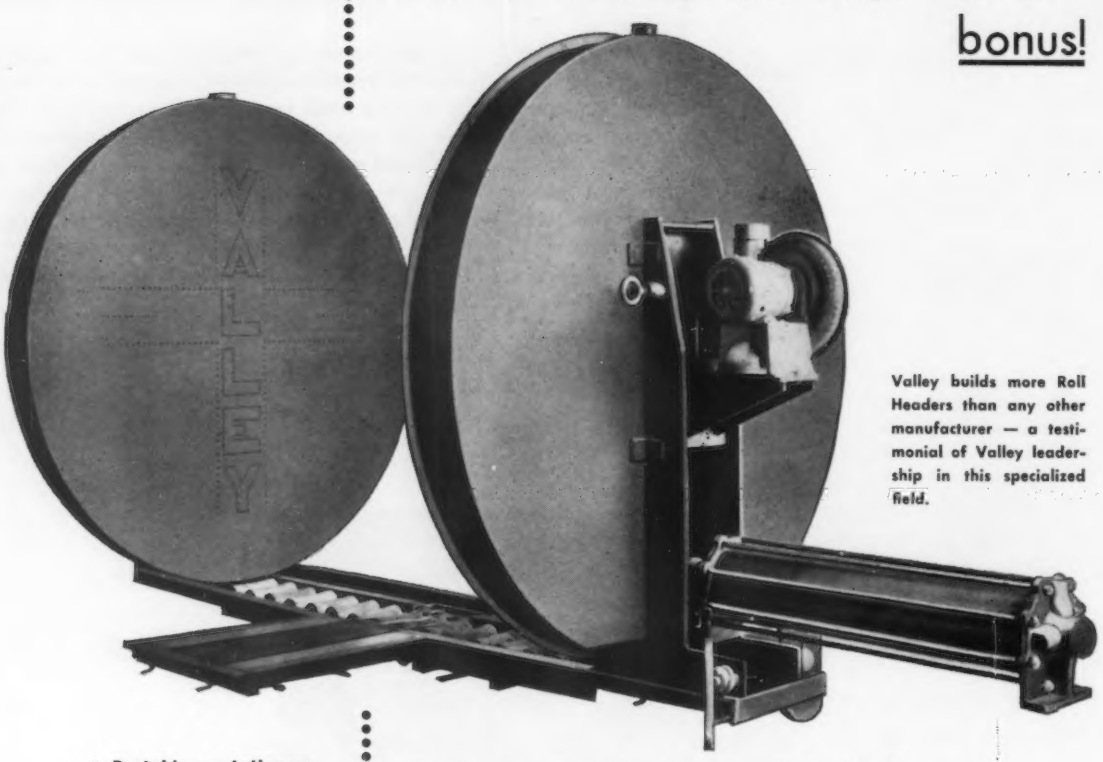
**Gould Paper Co., Lyons Falls, N. Y.; Daishowa Paper Manufacturing Co.; Jujo Paper Manufacturing Co. Ltd.; Tokohu Pulp Co. Ltd., Japan.*

The Bauer Bros. Co.
1758 Sheridan Ave., Springfield, Ohio

This Bauer double revolving disc refiner is bound for Gould Paper Co., Lyons Falls, N. Y., where production of Bauerite groundwood pulp from chips will soon be doubled.

VALLEY ROLL HEADERS

cut costs . . . and give you a better-looking "package" as a bonus!



Valley builds more Roll Headers than any other manufacturer — a testimonial of Valley leadership in this specialized field.

- Portable or stationary units.
- Any desired size.
- Available with automatic operation for high production.
- Furnished with or without scale.
- Cold, steam or electrically heated platens.

There was a time when heading rolls by hand was standard procedure. Today it is very costly. It is costly because Valley Roll Headers are effecting savings all the way up to 40% . . . and turning out a much more attractive "package" besides. It's a two-way benefit!

We have installations throughout the U.S.A., handling many different kinds of paper and different size rolls. Just drop us a line requesting the full story on Valley Roll Headers . . . and what they can do for you.

VALLEY IRON WORKS CORP., Appleton, Wisconsin

subsidiary of Allis-Chalmers Manufacturing Co.

Canadian Representative: Pulp and Paper Mill Accessories Ltd.,
P. O. Box 850, Station "O" Montreal 9, Quebec

SHELF TALKER—Alpha® Protein takes the cake at selling it!

The best-selling foods on super-market shelves are those that clamor for attention . . . tempt the shopper by creating the taste-treat right on the package.

How to achieve this full-blown realism on competitively produced coated paperboard? Use Alpha Protein, the chemically isolated soy protein binder. It improves whiteness and brightness, gives the smooth uniform surface needed for fine-screen halftones.

With Alpha Protein in the coating formulation higher solids can be attained, resulting in higher production speeds at reduced costs.

For the newer trailing blade coater, Chemurgy Division offers its Chem-Pro, a specially modified soy protein binder that provides even higher solids.

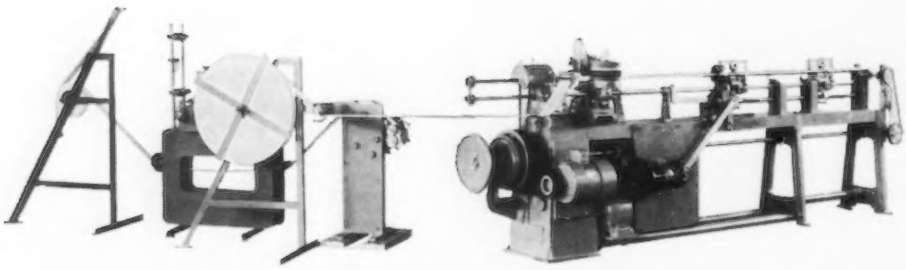
Chemurgy Division, pioneer in protein coating adhesives, can assure you a uniform high-quality product . . . adequate, on-time shipments . . . stabilized price . . . on-the-spot technical service.

25
YEARS OF CHEMURGY EXPERIENCE

CENTRAL SOYA COMPANY, INC.
CHEMURGY DIVISION
1825 N. Laramie Avenue · Chicago 39, Illinois

This is a sample of 4-color process lithography on Alpha Protein-processed paper

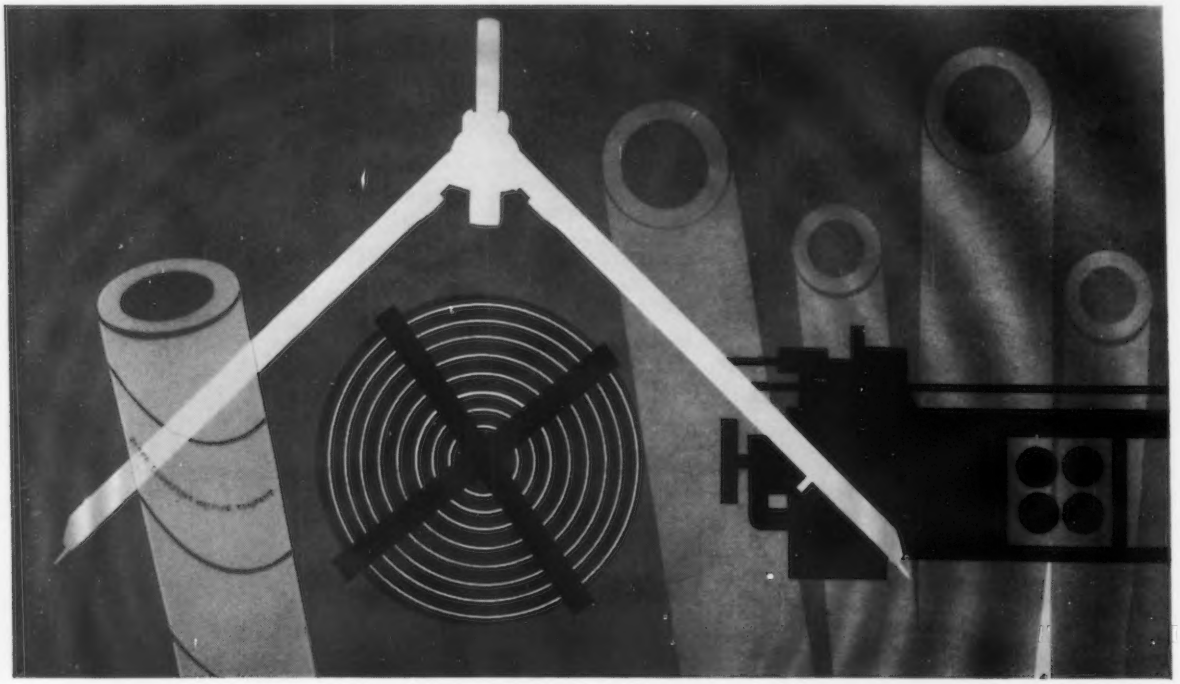
Creative engineering and development of converting machinery



New mechanical Core Machine — up to 200 feet per minute! A completely new mechanical core machine just developed by Paper Converting – Model 2330 – operates efficiently at high speeds, 180 to 200 feet of core per minute. Variable cut-off lengths are possible with score-cut clean ends as required for automatic core loaders. An optional one-color flexographic press is available for product identification. A wonderful new example of PCMCo's *creative* engineering . . . the kind that builds better production answers into converting machines.

PAPER CONVERTING MACHINE COMPANY · GREEN BAY, WISCONSIN

Folders, Rewinders, Embossers, Napkin and Core Machines, Letterpress and Flexographic Presses, Special Converting Machinery



Things are growing at Buckeye

PLANT CAPACITY DOUBLED IN 1959

Buckeye is growing bigger to serve you even better.

A recently completed addition doubles plant capacity, and both units have the most advanced equipment. Improved processes include double-screening for outstanding cleanliness, and 8-stage bleaching for top brightness without strength loss.

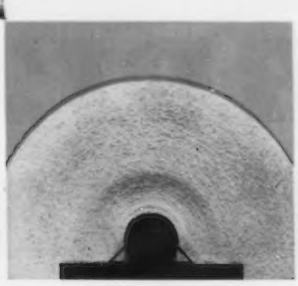
There's growth in Buckeye's timber supply, too. Company-owned holdings have been increased to over 800 thousand acres. Seedlings selected for pulping characteristics and fast growth are being planted at the rate of 10 million a year. If you're looking for a dependable source of supply to match your growth, let's talk it over. Buckeye specializes in market pulp.

BUCKEYE CELLULOSE CORPORATION
Memphis 8, Tenn.

Wood pulp plant at Foley, Fla.–Cotton linters plant at Memphis

BUCKEYE PULP

Bleached and Semi-Bleached Kraft from Southern Pine



GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE

GUARDITE® ROLLS

smoothest distributor rectifier roll coating ever created by man

So smooth that it is even used to cover stainless rolls, GUARDITE flows around corners of holes and covers any roughness from machining. GUARDITE, because of its outstanding corrosion resistance and long lasting surface, permits more mills to have low cost steel shells coated with this new material. Gone are problems of looseness and the covers peeling-off.

On the machine, you will find GUARDITE performs properly, because its smoothness does not tolerate stock pick-up.

For the new GUARDITE Roll catalog page containing complete technical information, contact your S-W sales engineer, or write to:

STOWE-WOODWARD, INC.

Ask the man from S-W . . .

about the extremely smooth and durable surfaces of Distributor Rolls with GUARDITE covers. Find out about their corrosion resistance; heat resistance, and trouble-free characteristics which put paper money in a paper man's pocket.

GUARDITE IS NEW
and
GUARDITE IS GOOD.

Ask your S-W sales engineer for the technical facts.

S-W INC.

STOWE-WOODWARD, INC
Newton Upper Falls, Mass.
Neenah, Wisconsin
Griffin, Georgia

on the West Coast
HUNTINGTON RUBBER MILLS, INC.
Seattle, Washington
Portland, Oregon
Port Coquitlam, British Columbia, Canada

Trends

High Operating Rates for January

Discounting for the time lost on the New Year's holiday both paper and board mills ran at 96% of capacity for the balance of the month of January. Comparable figures for the same period last year were respectively 91% and 92%.

Direct Invoicing on Merchants' Bag Sales

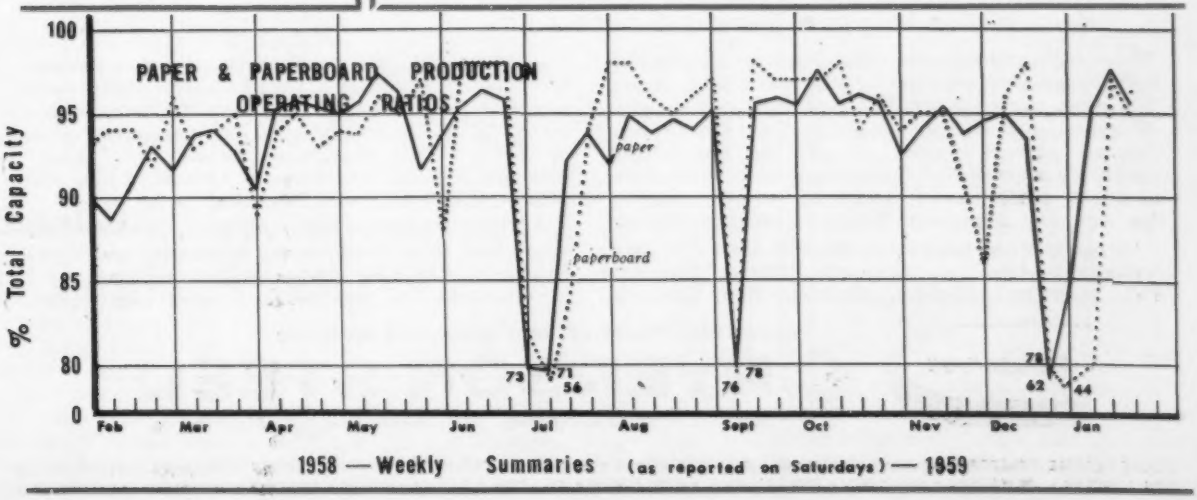
Opposition to direct invoicing to their merchant customers by some mills in the bag segment of the industry has been re-affirmed by the National Paper Trade Ass'n. In a recent statement NPTA has indicated that bag manufacturers are now looking to their merchants to provide direct financial contact with customers of the merchants.

Canadian Picture Reviewed by Expert

Canadian production in 1959 exceeded 1958 by 6% and fractionally led over the previous record year, 1956, states R. M. Fowler, president of CPPA in his annual report which is published in this issue and begins on page 34. Failure of the Canadian industry to show as large an increase over 1958 as did the U. S. industry (11%) is directly related to the fact that the large bulk of Canadian production is concentrated on market woodpulp and newsprint, two products in which there is at present world-wide over-supply. Mr. Fowler reviews the production activity in pulp and for different grades of paper and paperboard in Canada last year. In conclusion, he comments in some detail on the outlook for world-wide consumption of the Canadian industry's products. He pointed out that in spite of the increasing output of the mills, Canada is not maintaining its former share of the growing world market.

How Much Does It Cost You?

Most thinking people deplore the government crop support program in theory but don't think of it as touching them personally. If you are a married man with a taxable income of $10,000 a year, your federal income tax will be around $2,000. Of this, $100 a year is used for the farm support program so that you will pay higher prices for your food and clothes.



Stainless . . . or Plastic

WHICH ONE SOLVES YOUR CORROSION PROBLEMS BEST?

Ryerson offers both these corrosion fighters

Where high pressure and high temperatures demand *high-strength steel*, stainless is the overwhelming choice. And when you need stainless, look to Ryerson—with 2351 kinds and sizes of sheets, plates, bars, tubing, pipe and fittings in stock. In addition, our cutting equipment is unexcelled. For example, we can cut plates up to 12′ x 25′ absolutely square on our abrasive disc saw and accurately flame-cut intricate shapes.

On many other applications the best answer to your corrosion problem may be plastic, Ryertex®-Omicron PVC (polyvinyl chloride). Exclusive from Ryerson, this lightweight, rigid plastic licks more than 280 corrosive liquids and gases. It has been successfully used, when properly installed, at operating temperatures up to 212° F. Chemically inert, PVC imparts no odors or tastes; resists weathering, rotting and "aging." Non-sparking and nonmagnetic. Offered in pipe and fittings, sheets, rods, and fabricated parts.

A Ryerson specialist will gladly give you all the facts about both these anticorrosive materials—and about Ryerson's immediate service that meets your exact requirements. Call your nearby Ryerson plant today.

METALOGICS
RYERSON PLUS VALUES

INDUSTRIAL PLASTICS AND BEARINGS DIVISION

RYERSON STEEL®

Joseph T. Ryerson & Son, Inc., Member of the INLAND® Steel Family

PLANT SERVICE CENTERS: BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT • HOUSTON • INDIANAPOLIS
LOS ANGELES • MILWAUKEE • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO • SEATTLE • SPOKANE • WALLINGFORD

PAPER TRADE JOURNAL

WEEK OF FEBRUARY 8, 1960

ORIGINAL SAMPLE of the first paper produced by St. Regis Paper Co. is presented to Kenneth D. Lozier, St. Regis vice president (left), by David C. Knowlton, president of Knowlton Brothers Paper Co. At right is James E. Kussmann, St. Regis resident manager at Deferiet.

Paper Made in 1901 Given to St. Regis

The official presentation of the first paper made by the St. Regis Paper Co. of Deferiet on July 31, 1901, was made to the company by David C. Knowlton, president of the Knowlton Brothers Paper Co.

The sample has been in the possession of the Knowlton family for years, since Mr. Knowlton's grandfather, the late George W. Knowlton, Jr., was one of the original founders of the St. Regis plant at Deferiet in 1901. Mr. Knowlton's father, the late Theodore Ely Knowlton, was the first assistant secretary-treasurer of St. Regis at Deferiet. He left the company a few years after its founding to take a position with Knowlton.

Mr. Knowlton made the presentation of the scroll to Kenneth D. Lozier, vice president of St. Regis, and James E. Kussmann, resident manager of the company, in the offices of Knowlton Brothers. Mr. Knowlton also presented Mr. Lozier with an original copy of the Watertown Daily Times supplement covering the founding.

Great Northern Improvements To Cost $6 Million

Great Northern Paper Co. will invest some $6 million in new and improved manufacturing facilities at its Millinocket mill this year.

To make an expanded pulpwood harvesting season possible, and for other advantages, substantial improvements are being made in the woodyard and wood handling facilities at Millinockett mill. A new woodhandling system will be built during 1960, including a new woodroom, new indoor barkers, and unloading equipment.

The new facilities, to be installed at a cost of about $2 million, will enable the company to remove bark from rough wood the year around, instead of only in the summer as formerly. This project is expected to be completed by next December 1.

During the same period, a new groundwood screening system will be installed at Millinocket mill, representing an investment of about $1.5 million. This improvement will involve revamping the entire screening room of the mill at which most of the company's specialty printing papers are manufactured. The company also plans to expand its research facilities and operations towards process improvements and developments of new products.

Little Falls Paper Equipment Sold

Contents of the paper mill of the Little Falls Paper Co., Inc., Newbury, N. Y., has been sold by Gibbs-Brower Co., paper and pulp mill brokers and dealers in White Plains, N. Y. The equipment has been acquired by Osborne Paper Mill Equipment Co., which plans to liquidate the entire mill.

Paper and Paper Board Production

The American Paper and Pulp Association reported the ratio of the United States paper production to mill capacity for the week ending January 23, 1960, at 95.6 per cent compared with 97.4 per cent, revised for the preceding week. The ratio was 90.5 per cent for the corresponding week a year ago.

The National Paperboard Association reported the paperboard production ratio for the week ending January 23, 1960, at 95 per cent, compared with 97 per cent for the preceding week and 91 per cent for the corresponding week a year ago.

(Detailed statistics on page 50)

NEW 45,000 sq. ft. warehouse at Chesapeake Corp. of Virginia is designed to store 10,000 tons of kraft paper and paperboard. It is a multiple Armco truss-type steel building with an Aluminized steel roof containing translucent panels.

Initial FTC Decision in Monopoly Case Favors Scott Paper Co.

Scott Paper Co. has announced that the Federal Trade Commission has released an initial decision by hearing examiner, William L. Pack, in the complaint against Scott Paper Co. in which violation of section 7 of the Clayton Act and section 5 of the Federal Trade Commission Act was charged by reason of Scott's acquisition of Soundview Pulp Co., Detroit Sulphite Pulp & Paper Co. and Hollingsworth & Whitney Co.

The examiner's decision was handed down after a review of the entire record in the case and consideration of briefs and oral arguments by counsel. The examiner concluded:

"The sanitary paper products industry is highly competitive and there is no reason to believe that it will not continue to be so.

"The industry is expanding and doubtless will continue to expand in the future. All of the requisites appear to be present—increasing consumer demand, free access to ample supplies of raw materials and machinery and to the channels of distribution, and free access of new competitors into the market.

"Scott has no control over prices, production, raw materials, machinery, channels of distribution, or entry of new competitors into the market, nor is there any probability that it will have such control in the future.

"No satisfactory casual relationship has been established between the acquisitions and Scott's market position.

"The record fails to show that the effect of the challenged acquisitions may be substantially to lessen competition or to tend to create a monopoly.

"No violation of either section 7 of the Clayton Act, as amended, or section 5 of the Federal Trade Commission Act, has been established."

The decision of the examiner is subject to review by the Commission.

Idaho Firm Negotiates For Hallack & Howard

Hallack & Howard Lumber Co., Denver, Colo., may be purchased by Boise Cascade Corp., the world's fourth largest lumber producer, under plans negotiated by the executive committees of both firms. The multi-million-dollar transaction is subject to approval by stockholders of both firms.

F. C. Schmidt, president of Hallack & Howard, and R. V. Hansberger, president of Boise Cascade, confirmed reports of negotiations between the companies.

Banner Fibreboard Increases Capacity

Banner Fibreboard Co., Wellsberg, W. Va., has completed a plant improvement program which adds an estimated 15 per cent to its capacity for producing colored linerboard and other specialty paperboard. According to D. E. Lewis, vice president and general manager, the improvements also will result in improved color uniformity and opacity, while permitting greater versatility in changing production from one color to another.

Among new equipment installed at Banner are an open top stock preparation chest with an Agiflow pump, a jordan and a pH recording system.

Simpson Timber Plans Research And Development Lab. in Washington

Simpson Timber Co. of Seattle has just announced plans for establishing a forest products research and development laboratory on a ten-acre tract in Overlake Park, near Bellvue, Wash. Groundbreaking will take place this spring with operation planned for late fall.

The laboratory is Simpson's second major building project announced for 1960. Construction of an ultra-modern sawmill at Shelton, Wash., began this month.

Laboratory services at Overlake Park will be available to all branches of the 65-year old Simpson Co. in Washington, Oregon and California. These include Simpson Logging Co. operations in Washington and Oregon; Simpson Engineered Wood Products Co. in Portland and the Simpson Redwood Co. in northern California. The laboratory also will serve the Simpson Lee Paper Co. plants in Everett, Wash.; Vicksburg, Mich.; and Ripon, Calif.

The Simpson structure will cover about 20,000 square feet. The design will present a unique approach in laboratory building. The structure will feature Simpson woods in the form of stressed skin plywood panels, folded plates, box beams and selected plywoods. The exterior layout will feature convenient access between offices and the laboratory and pilot plant areas. John V. Gould, section chief of engineering research for Simpson, will supervise construction.

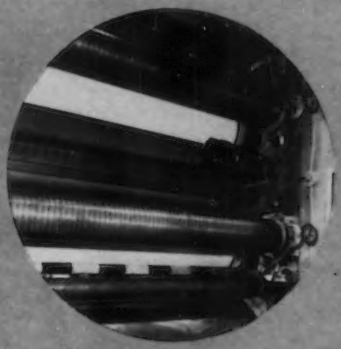
The laboratory will employ 40 scientists, technicians and project specialists in its initial staff. The site selected is close to the company's central administration office in downtown Seattle and to the University of Washington facilities.

Vickery RS Type Doctors make blade changing quick and easy when space is limited.

Vickery Hi-Angle Doctors promote high cleaning efficiency, leak-proof operation and long blade life.

Vickery Hi-Flex Doctors hug every inch of the roll regardless of irregularities or temperature changes.

When your papermaking rolls are equipped



Vickery Oscillating Doctors are standard whenever oscillation is indicated. They may be hydraulically or motor operated.

Vickery Air Lift Doctor Control provides automatic remote control lifting of one Doctor or all, at the touch of a lever.

WITH

VICKERY DOCTORS

you can be confident that each and every roll will be continuously in shape to do its best work, and keep on doing it month in and month out.

The engineering and application experience back of every Vickery Doctor installation gives you that assurance.

BIRD MACHINE COMPANY

SOUTH WALPOLE, MASS.

REGIONAL OFFICES: EVANSTON, ILLINOIS
PORTLAND, OREGON • ATLANTA 9, GEORGIA

Canadian Manufacturers of Bird Machinery
CANADIAN INGERSOLL-RAND COMPANY, Limited, Montreal

PAPER PEOPLE

M. A. Burnston

TAPPI Adds Burnston As Staff Member

M. A. Burnston has joined the Technical Assn. of the Pulp and Paper Industry as a member of the permanent headquarters staff in the capacity of technical assistant, according to an announcement released by Philip E. Nethercut, secretary-treasurer of the association.

In his new position Mr. Burnston will work with TAPPI's technical associates in the development, execution and guidance of TAPPI divisional and committee activities.

Mr. Burnston is a graduate of Brooklyn College (B.S. degree in geology), a frequent lecturer on testing techniques at Hofstra College and Rutgers University, currently lecturing on industrial packaging at City College of New York, and a member of the Society of Packaging and Handling Engineers. Prior to joining TAPPI he was senior engineer and laboratory supervisor of the New York division of Container Laboratories, Inc.

Hearn Joins Celotex As V-P Operations

The Celotex Corp. has elected Ira K. Hearn, Jr., vice president in charge of operations to succeed William L. Rodish, who recently resigned to become president of Continental Diamond Fibre Co. Mr. Hearn joins Celotex following 11 years with Kennecott Copper Corp., most recently as assistant to the president.

Canadian Firms Announce Executive Appointments

Three senior executive appointments at the Ontario Paper Co., Ltd., Quebec North Shore Paper Co. and Quebec and Ontario Transportation Co. were announced by Arthur H. Schmon, president.

The associated companies operate newsprint mills and extensive forest operations throughout Ontario and Quebec, serviced by a fleet of Great Lakes Seaway ships.

All residents of St. Catherines, Ont., the new appointees are Bernard Panet-Raymond, vice president of industrial relations; Peter A. Harakas, vice president of engineering; and Robert M. Schmon, assistant executive president.

Hubbard to Head Weston Paper

M. T. Hubbard of Terre Haute, Ind., executive vice president of the Weston Paper and Manufacturing Co., has been elevated to president of the firm which maintains its headquarters in Dayton, Ohio.

Mr. Hubbard succeeds H. C. Lange, who died earlier this month.

C. H. Hutchins, also of Terre Haute, was named senior vice president.

Both Mr. Hubbard and Mr. Hutchins have been with the firm about 20 years.

Weston operates paper mills at St. Marys and Terre Haute and box plants at Terre Haute and Chicago.

Crown Zellerbach Corp. Announces Promotions

Crown-Zellerbach Corp. announces the following promotions:

Paul Larson, assistant engineer, Port Angeles — to assistant master mechanic;

Bill Maxwell, superintendent, multiwall bag plant, Bogalusa — to production manager, bag and bag papers, San Francisco;

Don Nadig, assistant multiwall superintendent, Bogalusa—to multiwall superintendent;

Jack Caldwell, shift foreman, Antioch mill—to assistant multiwall superintendent, Bogalusa.

Also announced is the promotion of Robert McNaghten, assistant Eastern division manager, New York—to division manager, Jersey City. Mr. McNaghten will be responsible for production and sales of the Jersey City box plant.

B. T. Leithead

Leithead Elected To Westvaco Board

Barry T. Leithead, president of Cluett, Peabody & Co., Inc., has been elected to the board of directors of West Virginia Pulp and Paper Co.

Connected with Cluett, Peabody since 1929, Mr. Leithead has been a director of the company since 1946 and president since 1948. During World War II he was director of the Industry Advisory Committee of the War Production Board.

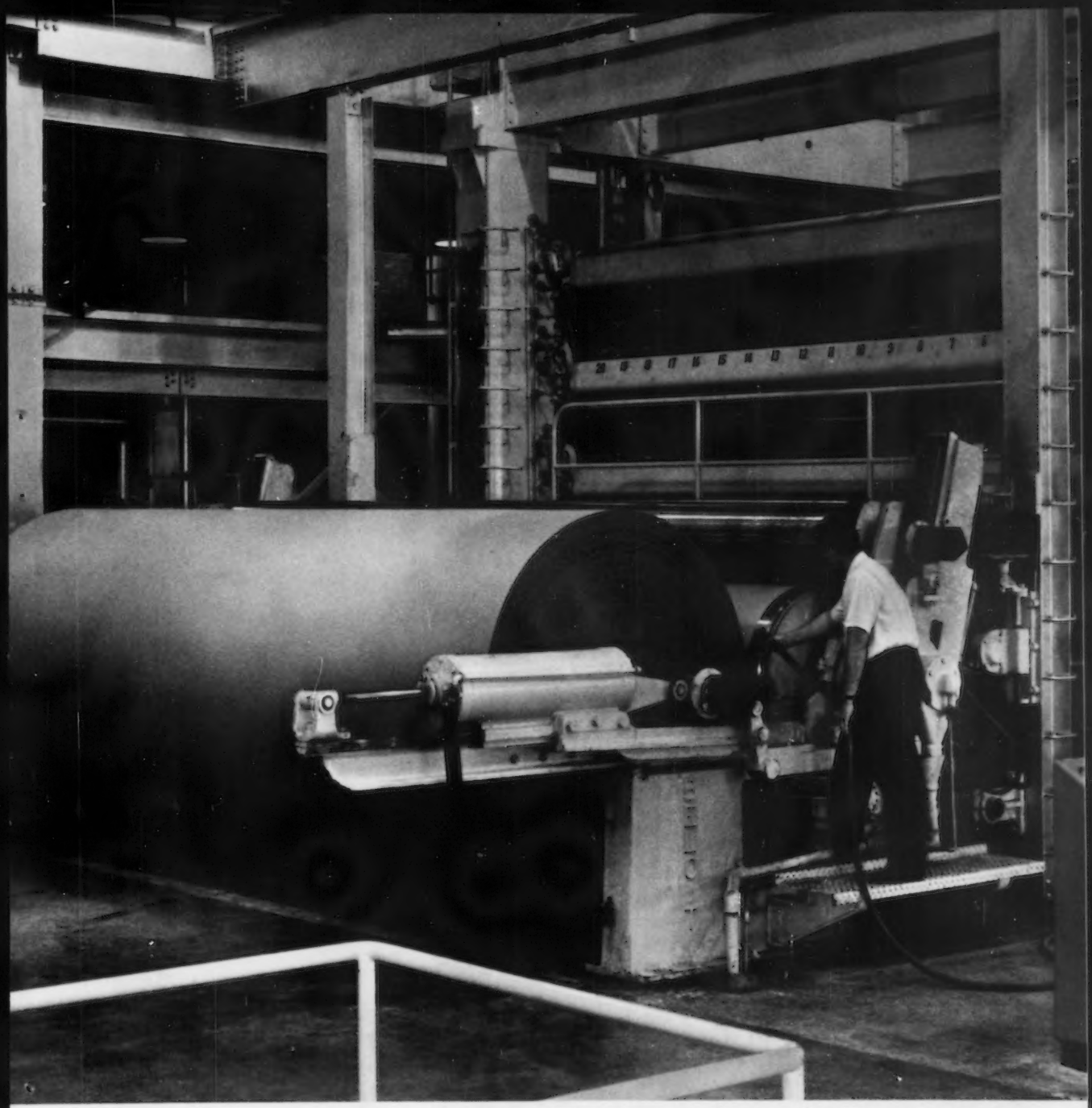
Mr. Leithead's company joined with West Virginia in 1958 to form Clupak, Inc., a new company organized to license producers of Clupak stretchable paper. This revolutionary paper product was developed by the paper company from a patent held by Cluett, Peabody.

Taylor Fibre Names Guin Personnel Director

Jesse J. Guin, Jr., has been appointed personnel director by Taylor Fibre Co., Norristown, Pa., manufacturers of laminated plastics and vulcanized fibre.

Mr. Guin was formerly in the labor relations department of Union Carbide Corp.'s Nuclear Division in Oak Ridge, Tenn.

He is a member of the American Bar Ass'n., Tennessee Bar Ass'n., and the United States Supreme Court Bar. He has served on the American Bar Ass'n.'s committee to study employer-employee collective bargaining.



S. R. CHRISTENSEN

Pneumatic Reel, No. 4 Machine, Union Bag-Camp Paper Corporation, Camp Division, Franklin, Virginia

Union Bag-Camp Paper Corporation

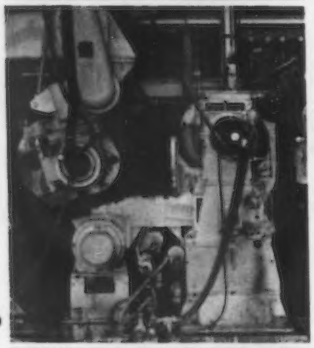
Production flexibility on bleached and unbleached kraft grades: Union Bag-Camp Paper Corporation's new No. 4 machine at Franklin, Virginia. Successful start-up of this 236" machine marked the culmination of a four-year expansion program at Franklin. For further views and details, please turn the page.

close-up of 236" Beloit Kraft Paper Machine at Union Bag-Camp Paper Corporation, Camp Division

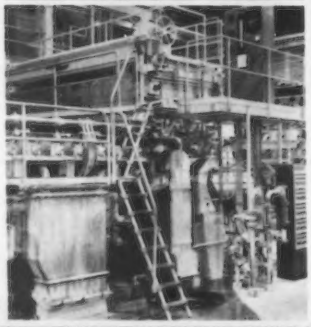
Designed to run in the 2000 fpm range, this versatile machine can operate efficiently over a wide range of production grades. The addition of No. 4 machine and the rebuild and modernization of two other machines have resulted in a 50% increase in daily output. **(a)** Oscillating unwind stand, water-cooled brake, and Beloit tru-tension regulator; **(b)** suction pickup arrangement; **(c)** Beloit air-cushioned inlet and shaking Fourdrinier; **(d)** Beloit high-speed suction pickup press section; **(e)** Beloit Model "L," heavy-duty kraft winder; **(f)** Beloit differential drive; **(g)** twin open-sided calender stacks.

a

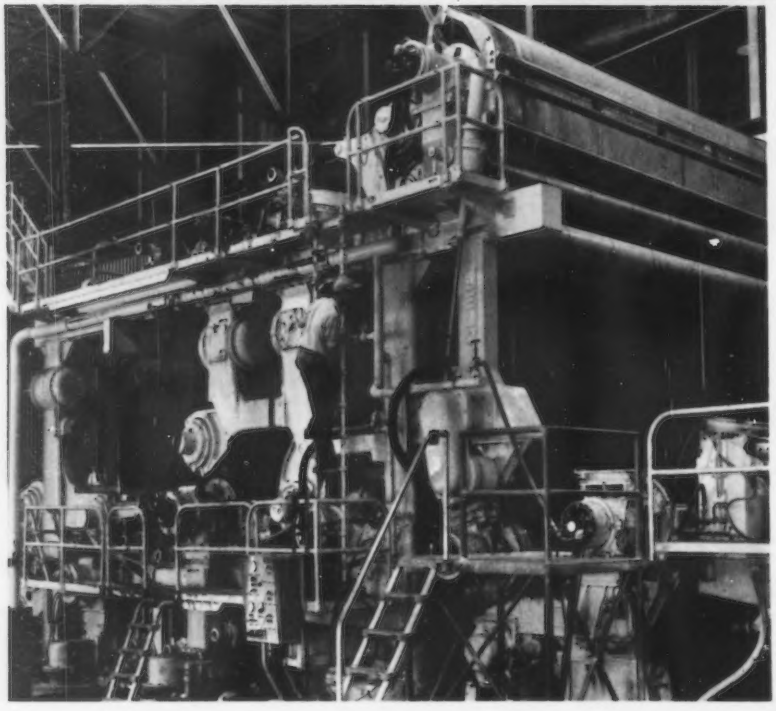
b



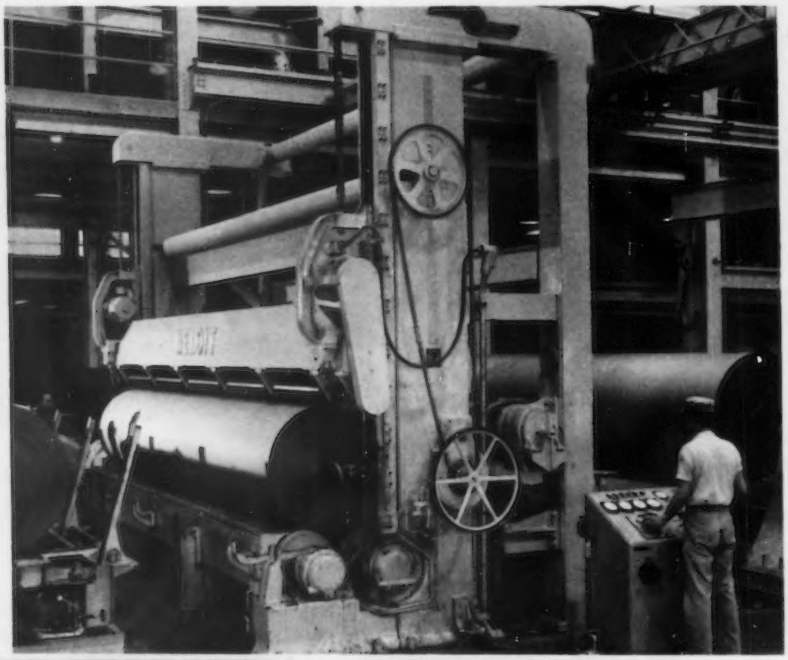
c



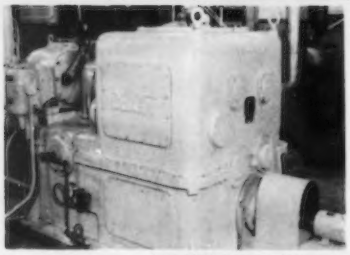
d



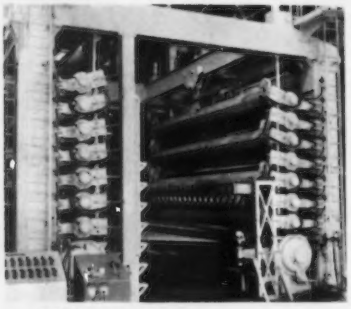
e



f



g



BELOIT IRON WORKS PAPER MACHINERY BELOIT, WIS., U.S.A.

BELOIT

PAPER MACHINERY

your partner in papermaking

This insert lithographed on Union-Camp's Williamsburg Offset

McCall Resigns Post At Simpson Paper

Donald McCall has resigned as vice president and general manager of the Simpson Paper Co.

His successor will be named later. Until that time, Maxwell D. Bardeen, president, will assume responsibility for the operations of the company.

J. D. Gunther

Air Reduction Officer Elected to Ruberoid Board

Jack D. Gunther, vice president of Air Reduction Co., Inc., was elected to the board of directors of The Ruberoid Co., according to E. J. O'Leary, chairman and president of the company. Mr. Gunther is a director of Cumberland Chemical Corp., jointly owned by Air Reduction and Ruberoid, and an officer and director of Cuban Air Products Corp., a subsidiary of Air Reduction. He is a member of the bar in the states of New York and Delaware.

St. Regis Names Lamb Mgr. Tacoma Operations

Jack M. Lamb, resident manager of St. Regis Paper Co. at its Tacoma, Wash., kraft center, has been appointed general manager for all of the company's Tacoma operations.

In this position, Mr. Lamb has direct responsibility for the logging and forestry department, the pulp and paper mill, and the sawmill, and plywood operations and retail lumber yard of St. Paul & Tacoma Lumber Co. He reports directly to the company's executive vice president in charge of operations, Benton R. Cancell.

The following senior executives of St. Paul & Tacoma Lumber Co. division retired from active service effective December 31, 1959, but continue to be available to the company as consultants:

Everett G. Griggs, II, president, and a director of St. Regis; G. Corydon Wagner, vice president and general manager of manufacturing and sales; and W. Hilding Lindberg, vice president and general manager of the Tacoma area forestry and logging department of St. Regis.

Effective with these retirements, the company has appointed three new managers who will report directly to Mr. Lamb. S. Kepple Pratt, former general superintendent of pulp and paper operations at the Tacoma mill, has been named resident manager, succeeding Mr. Lamb.

Robert L. Martin, former logging manager, has been appointed manager of the logging and forestry department in the Tacoma area. Charles L. Morey, a former manager of Crown Zellerbach's Columbia City division, has been named resident manager of the St. Paul & Tacoma division operations including lumber and plywood.

Robert F. Lynch becomes manufacturing superintendent at the Tacoma, Wash., mill. He succeeds Mr. Pratt. Mr. Lynch has been with St. Regis since 1948.

Bongers Joins Mac Sim Bar As General Supt.

Henry A. Bongers, Sr., has assumed duties as general superintendent of the Mac Sim Bar Paper Co., Otsego, Mich.

Mr. Bongers, a former Sutherland Paper Co. employe, has more recently been associated with the Fort Orange Paper Co. near Albany, N. Y. He replaces Leslie P. Peck, who resigned in August to accept the position of general manager of the New Haven, Conn., branch of the Federal Board and Carton Co.

Looking for a new position?

Looking for new personnel?

Keep your eye on our Classified Advertising Section

Manion Joins Davey In Constantine, Mich.

Thomas J. Manion has joined the Constantine Paperboard Division of The Davey Co., Constantine, Mich., as superintendent. Mr. Manion was associated for 33 years with the Downingtown Paper Co., Downingtown, Pa.

N. S. Benzing

Chase Bag Names Benzing Chagrin Falls Mill Mgr.

Nelson S. Benzing has been named manager of the Chase Bag Co. paper mill in Chagrin Falls, Ohio. He succeeds Robert D. Rusch, who died last year.

Mr. Benzing takes over administration of an expansion program which is under way at the specialty mill. Additional new equipment and improved techniques are planned to substantially increase production in both paper making and converting.

A native of Hamilton, Ohio, Mr. Benzing is a graduate in chemical engineering of Renesselaer Polytechnic Institute. Before joining Chase he was manager of the Fitchburg Paper Co. in Fitchburg, Mass. He has also been on the technical staff of other mills specializing in the production of hard-to-make kraft papers, among them the Champion Paper and Fibre Co., and Wren Paper Co.

The Chase paper mill, over a century old, is operated by the Chase Bag Co. and sells its production nationally to a wide range of users of specialty papers.

Spencer Succeeds Volkmann At Tonawanda Mill

Robert W. Spencer has been appointed operations engineer of the Tonawanda Boxboard Mill of Continental Can Co. Inc. He succeeds Herbert W. Volkmann, who has moved to New England.

Fraser Paper

Join the parade of leading mills saving money with JONES ADAPTA-PLUG and FULBAR FILLINGS

*Patented

CLAREMONT PAPER MILL

ALTON

WHIPPANY PAPER BOARD

CHAMPION PAPERS

Jones

PULP MILL EQUIPMENT AND STOCK PREPARATION MACHINERY

Georgia-Pacific Chooses Flowerree as President

Appointment of Robert E. Flowerree, Jr., as president of the Georgia-Pacific Paper Co., effective on April 1, has been announced. The company is a wholly owned subsidiary of the Georgia-Pacific Corp. Mr. Flowerree will continue as vice president in charge of manufacturing for the parent company.

As president of the paper company he succeeds H. Stuart Daniels, who has been elected chairman. The company also announced that Albert G. Naudain, a vice president, would assume full responsibility for sales.

Scott Paper Promotes Three

Promotion of Harry H. Reese to manager of the packaging procurement department of the procurement division of Scott Paper Co., Chester, Pa., has been announced by the company. Prior to this promotion, Mr. Reese was purchasing agent at the Fort Edward mill of the Marinette Paper Co., a subsidiary of Scott Paper Co.

Paul M. Gratz, who has been serving as plant traffic manager at Marinette Paper Co., has been promoted to the new position of purchasing and traffic manager.

The company also announced the promotion of John R. Agler to senior buyer in the purchasing department at the Fort Edward plant. Mr. Agler has been serving as buyer.

U. of Me. Foundation Award To Be Presented

The University of Maine Pulp and Paper Foundation will present its tenth annual Honor Award when the University of Maine Pulp and Paper Alumni Luncheon is held in New York City on February 24.

The speaker will be William M. Hall, president of Charles T. Main, Inc., of Boston, Mass. His subject will be "The St. Lawrence Seaway."

All University of Maine alumni connected with the pulp and paper and allied industries are invited to the affair which is held annually in conjunction with Paper Week activities in New York.

The luncheon will be held in the Music Room of the Biltmore Hotel. Robert N. Zabe, engineer with Charles T. Main, Inc., Boston, Mass., a graduate of Maine in 1950, will be the chairman.

The winner of this year's Honor Award will not be announced until the time of the luncheon.

Paul Van Derveer

Assoc. Editor Van Derveer Goes Back To College

Associate Editor, Paul Van Derveer, has gone back to college so that we may serve our readers better. He is in Atlanta taking a short course in material handling at the Georgia Institute of Technology.

WMU Paper Technology Committee Elects Officers

Bert H. Cooper, who retired January 1 as a vice president of the Kalamazoo Paper Co., was re-elected to a one-year term as chairman of the advisory committee for paper technology at Western Michigan University. William A. Kirkpatrick, president of the Kalamazoo Paper Box Co., is the new vice chairman for the important industrial-university committee. Dr. Alfred H. Nadelman, head of the WMU paper technology department, continues as secretary.

At the annual meeting certificates of appreciation were presented to two retiring committee members, L. D. Nicolson, vice president of the Hamilton Paper Co., Plainwell, and A. L. Sherwood, vice president, KVP Sutherland Paper Co., Kalamazoo.

PAPER TRADE JOURNAL is always mailed on Friday at East Stroudsburg, Pa. If you feel that there is undue delay in receiving your copies, we suggest that you write to your local postmaster, with a copy to S. E. Marsh, assistant postmaster at East Stroudsburg. If you will also send a copy of your complaint to us, this will keep us posted on areas of poor service.

Which of these 3 products and services can you use from BECCO?

New Cold Caustic Bleach Process

Looking for a way to use greater amounts of low-cost, more plentiful pulp—without capital investment for bleach equipment? Then let a Becco Sales Engineer show you our new technique* which allows you to bleach in the same equipment regularly used for the manufacture of cold caustic pulp.

In this new process, peroxide bleach liquor is added at the Bauer Refiner, and bleaching occurs during the refining operation. Bleach response depends on refiner densities.

Up to 20 points brightness increase has been obtained in commercial operations to date, and with no additional steam costs, no holding time, and no excessive chemical costs.

Becco can assist you immediately in setting up a production run and evaluating results. First step: use the coupon to let us know you're interested.

Need a Bleach Plant in a hurry?

By now, you've probably heard about Becco's Dryer Steep Bleaching Process for insuring brightness permanence by spraying Hydrogen Peroxide across the pulp sheet ahead of the dryers. And you probably know that although the process is patented, Becco will grant a perpetual license for just $1.00.

But there may still be a question in your mind as to how you can prove this out in your own mill—how you can set up a bleach plant in a hurry.

Becco has the answer to this, too. We'll be glad to provide you with a complete "bleach-plant kit"—for as long as you need it—consisting of all the equipment needed to make up peroxide bleach liquor and spray your production sheet.

Here's an opportunity for you to prove to yourself, quickly and easily, that this Becco process will maintain your layboy brightness level — even **improve** it — through shipping and delivery.

If you'd like to take us up on this offer, drop us a line, or mail the coupon below. And of course, even after we demonstrate, you incur no obligation.

TECHNICAL BULLETINS

We got 'em—
You can have 'em!
They're FREE!

Years of experience in paper and pulp processing have produced a library of technical information which is available in individual bulletins, free on request. Use the coupon below to let us know which you'd like to receive.

- **No. 31 — Groundwood Bleaching Variables — A Statistical Approach.**
- **No. 32 — H_2O_2 Bleaching of Chemicals and Mechanical Pulps.**
- **No. 47 — Peroxide Bleaching of Pulps.**
- **No. 48 — High-Density Pulp Bleaching.**
- **No. 64 — Development Studies on Last-Stage H_2O_2 Bleaching of Alkaline Pulps.**
- **No. 65 — Peroxide Bleaching of Southern Pulps.**
- **No. 66 — Becco Laboratory Procedures for Pulp Bleaching, 1955 Ed.**
- **No. 91 — Peroxide Bleaching of Chemi-Mechanical Hardwood Pulps.**
- **No. 92 — Peroxide Bleaching of Chemical Pulps.**

BECCO fmc

BECCO CHEMICAL DIVISION, FMC
Station B, Buffalo, New York

Dept. PTJ-H

Gentlemen:
Please have a Sales Engineer give me more information on Becco's Cold Caustic Bleach Process.

NAME_____

FIRM_____

ADDRESS_____

CITY_____

ZONE_____ STATE_____

BECCO fmc

BECCO CHEMICAL DIVISION, FMC
Station B, Buffalo 7, New York

Dept. PTJ-J

Gentlemen:
Yes! We need a "bleach plant in a hurry". Please send us more information about Dryer Steep Bleaching.

NAME_____

FIRM_____

ADDRESS_____

CITY_____

ZONE_____ STATE_____

BECCO fmc

BECCO CHEMICAL DIVISION, FMC
Station B, Buffalo, New York

Dept. PTJ-G

Gentlemen:
Please send me a copy of each of the following bulletins:

— — — — — — — —

NAME_____

FIRM_____

ADDRESS_____

CITY_____

ZONE_____ STATE_____

PJT NEWS OF CONVERTERS

R. J. Bedell

Consolidated Paper Names Manager for New Plant

Consolidated Paper Co., has appointed Robert J. Bedell factory manager of the new branch plant of the company at Bremen, Ind.

Mr. Bedell came to Consolidated March 16, 1959, as plant engineer. He has lived in Monroe since 1936, having been with the Detroit Stoker Co. as vice president in charge of engineering and general superintendent in charge of all operations of the plant for many years.

Wabash Fibre Box Announces Appointments

Wabash Fibre Box Division of Weston Paper and Mfg. Co. announces the appointment of David R. Rappaport, as staff sales representative to the brewing and beverage industries. Mr. Rappaport was formerly with National Can Co. He will headquarter at the Chicago plant of Wabash.

Eugene W. Klepfer, formerly with Fort Wayne Corrugated as manager, Hartford City plant, has joined the Wabash organization at Terre Haute. Mr. Klepfer, a graduate of Grinnell College, has many years of experience in the paperboard and corrugated box industry.

David Roe Chamberlain, formerly with Union Bag-Camp, has joined Wabash as New York representative, with headquarters in the Corning Building, 717 Fifth Avenue, New York, N. Y.

R. C. Can Co. to Open Chicago Plant

R. C. Can Co., St. Louis manufacturer of fibre cans and spools, will open a new plant in the Chicago metropolitan area. The new plant, to be located in Elk Grove, Ill., will contain 60,000 square feet of floor area.

The company, which has its headquarters in St. Louis, has plants in Rittman, Ohio; Turner, Kan.; Arlington, Tex.; Los Angeles, Calif.; and New Albany, Ind.

Gardner Names Ecclesine V-P, Packaging Sales

T. C. E. Ecclesine has been named vice president in charge of packaging sales of the Gardner Division of the Diamond National Corp., Middletown, N. Y. Mr. Ecclesine joined the packaging firm in 1958 as director of marketing service. In his new position he will retain his former duties along with the responsibility for all sales activities for Gardner in the carton areas of packaging.

General Fibre Box Elects Hollingshead President

C. Wade Hollingshead a vice president since 1954, was elected president and treasurer of General Fibre Box Co., of West Springfield, Mass.

At the same time, Seaman E. Rossetter stepped down at his own request as president and treasurer and assumed the vice presidency.

Clarence J. Schoo was re-elected chairman of the board, a position he has held since 1956 when he relinquished the presidency.

Corliss H. Wright was elected clerk of the corporation.

Mr. Rossetter joined the original General Fibre Box Co. in 1920, the year of its organization. Mr. Hollingshead became affiliated with the company in May 1922.

In 1929 Mr. Rossetter became vice president and sales manager, and in 1956 was elected president, to succeed Mr. Schoo. It was for reasons of health, the company said, that Mr. Rossetter recently asked the directors of Longview Fibre Co., which owns the entire capital stock of General Fibre Box, to relieve him of his responsibilities, to appoint a new president and to permit him to take an early retirement.

He has, however, agreed to remain on a part-time basis as a consultant to the new president until his retirement date.

Longview Fibre Co. is located in Longview, Wash.

How I-P Uses Hi-density Polyethylene In Multi-wall Bags

A major economic breakthrough in the paper packaging industry is said to have been achieved with the development of a new high-density polyethylene extrusion coating compound. This material is claimed to cut in half the coating weights required to give paper excellent impermeability to moisture, grease and oils. It can be extruded onto paper at good commercial speeds in coating weights as low as six pounds per ream. Formerly, 20 pounds per ream was the lowest practical coating weight possible with high-density polyethylene.

KEEPS THIRSTY CRYSTALS DRY

Testimony to the end use advantages of this material is provided by International Paper Co. Within the past few months, International has commercially introduced multiwall shipping bags having a coating extruded from DGDD-7401 natural, manufactured by Union Carbide Plastics Co. The high-density coated multiwall bag is especially suited for use in the shipment of such "thirsty crystal" materials as certain resins and compounds, calcium chloride and a wide variety of fertilizers, including ammonium nitrate. The coating maintains the vital dryness of these products and keeps them free-flowing, even in high temperatures and humidities.

International introduced the new multiwall bags after test results in its own laboratories were confirmed in a program carried out by an independent testing laboratory. In a 360-hour test at 100 deg. F. and 90 per cent relative humidity, high-density (0.95) polyethylene-coated kraft paper multiwall bags, filled with 50 pounds of calcium chloride averaged far less moisture pickup than multi-

walls having heavier coatings of low-density (0.917) polyethylene. For example, a 6-pound per ream coating of high-density polyethylene held moisture pickup to .057 pounds per 50-pound bag per 24 hours. Comparable figures for a 10-pound low-density coated bag were .066 pounds moisture pickup per 24 hours.

Similar ratios held true in heavier coatings. An 8-pound per ream high-density coating showed an average moisture pickup of .056 pounds per 24 hours, while a 15-pound low-density coating averaged out to a .058 pound pickup. An 11-pound high-density coating had a pickup of only .050 pounds, compared to .054 pounds for a 20-pound low-density coating.

SAVINGS POSSIBLE

Multiplied by the thousands of multiwall bags a large chemical manufacturer uses, high-density polyethylene coatings can produce significant savings. Product protection may be improved while packaging costs are lowered because less polyethylene is needed. Depending on bag construction, International estimates that overall savings can range from $1.50 to $14.50 per thousand bags. Data obtained in the laboratories of Union Carbide show that the moisture protection offered by a six-pound per ream high-density polyethylene coating surpasses that of asphalt/paper laminated constructions commonly used for shipping highly moisture-critical products. The polyethylene coating also gives greater protection to the paper against deterioration from the high acid/alkali content of such products as ammonium nitrate, both in shipping and through extended storage periods.

In addition to its high moisture barrier and chemical resistance properties, DGDD-7401 natural is reported to give multiwall bags superior scuff and abrasion resistance, improved slip properties and higher heat resistance. Also important, for other packaging applications as well as for multiwall bags, is the excellent grease and oil barrier properties of high-density coatings. In the laboratories, under exposure to several high-penetrating substances, 1.5-mil high-density coatings extruded from DGDD-7401 natural onto 25-pouch paper registered much lower permeability ratings than low-density coatings of the same thickness. For example, in a test with motor oil, high-density coatings averaged 120 days to failure (the first sign of staining on the uncoated side) compared to 6 days for the low-density coatings.

Claussen, Bemis V-P, Retirement Announced

Bemis Bros. Bag Co. has announced the retirement of H. P. Claussen, vice president, procurement and materials.

Mr. Claussen, a native of Hartford, Conn., has been located during most of his 43-year career with Bemis at the company's Boston offices.

The 65-year-old executive joined Bemis in 1916, following his graduation that year from Massachusetts Institute of Technology with a B.S. degree in mechanical engineering. Starting as the company's first New England salesman, he was transferred to the cotton department in 1920 and became director of that department in 1942.

Stone Container Adds Waugh to Corporate Staff

Fred Waugh, former plant manager of Stone Container Corp.'s Mansfield (Ohio) Division, has joined the firm's corporate staff. He is assigned to special projects as directed by J. N. Williams, general production manager.

New plant manager for the Mansfield Division, which produces corrugated boxes, is Robert L. Strong, who has been assistant plant manager.

In his new position, Mr. Waugh will be based in Mansfield, because of its central location among various Stone Container plants.

Previously he had been box plant manager, Ball Bros. Co., Muncie, Ind.; production manager, Ohio Boxboard Co., Rittman, Ohio; and plant superintendent for Container Corp. of America at Anderson, Ind.

Continental Can Expands Tyler Box Plant

Continental Can Co., has added 83,000 square feet to its corrugated box plant in Tyler, Tex., tripling its original size and its production capacity. The payroll for 1960 is double that of 1958, the year the plant opened, with a total of 85 people now employed. The plant expansion, along with the addition of a new 280-foot-long corrugating machine, amounted to an additional investment of $1,250,000.

The main addition of the new 85-inch corrugator permits materials to be corrugated in one room of the plant, cut and imprinted in the next, then shipped to customers nearby —for 95 per cent of the plant's customers are located within 200 miles of the facility.

"Nice - Hic!—But we really ordered sodium chlorate!"

W. T. Bennett
New Chairman

E. L. Neal
New Vice Chairman

C. J. Jeffrey
New Councilor

Many Interesting Developments Reported at Canadian Technical Meeting

Report on Inverform machine, survey of Russian pulp and paper industry and a comparison of kraft and sulphite pulps were among highlights.

Canadian technical and operating men held their annual meeting the last week of January at the Queen Elizabeth Hotel in Montreal. Sponsored by the Technical Section, Canadian Pulp & Paper Ass'n., the very comprehensive program covered all phases of pulp, paper and paperboard production.

Highlights of the sessions were the Stadler memorial lecture on the Inverform machine by L. A. Lawrence, Ste. Anne's Board Mills, Bristol, England; a panel discussion on the Russian pulp and paper industry by the nine Canadian industry representatives who recently toured the USSR; and an all day session comparing kraft and sulphite pulps.

Excepting for minor changes the Inverform machine is substantially the same as described in the article by our editor in the June 20, 1959, issue of PAPER TRADE JOURNAL. The comments of the panel on the Russian industry are summarized later on. The findings of this group show remarkable uniformity with those of the editor reported in the August 10, 1959, issue of this magazine, following his brief trip to the USSR last spring.

The program of this meeting also reflected considerable emphasis on the topics of material handling and maintenance.

Highlights of some of the most interesting papers and sessions are summarized in the following pages.

Bennett New TS Chairman

Election of W. T. Bennett, vice president, engineering, Canadian International Paper Co., Montreal, as chairman of the Technical Section, Canadian Pulp and Paper Ass'n. was announced. Mr. Bennett succeeds J. McK. Limerick, director of research and development, Bathurst Power and Paper Co., Montreal.

Elected vice-chairman of the section was E. L. Neal, president, Gaspesia Sulphite Co., Chandler, Quebec. Elected to the Technical Section Council for three-year terms were: J. Ashby, executive vice president, Westminster Paper Co., Montreal; G. C. Brown, vice president and general manager, Price Brothers & Co., Quebec City; and C. J. Jeffrey, vice president, manufacturing, The Great Lakes Paper Co., Fort William, Ontario.

W. T. Bennett has served as vice president, engineering, of Canadian International Paper Co. since March 1959. Mr. Bennett was born in Worcester, Mass., and is a graduate of Tufts University. He joined International Paper Co. in New York in 1924, coming to Canada four years later as chief draftsman at the Gatineau mill of CIP. He subsequently became plant engineer at Gatineau.

He moved to Montreal as assistant chief engineer for the company's newsprint division in 1942, becoming chief engineer of the division two years later. In 1950 he was appointed chief engineer, and served in this capacity through a period of major capital improvements to the company's mills.

Award Winners

Weldon Medal: Awarded to Dr. W. A. Mueller, Pulp and Paper Research Institute of Canada; presented by John Buss, Provincial Paper, Ltd., Toronto.

F. G. Robinson Technical Service Medal: Awarded to Douglas Duncan, Missiquoi Specialty Board Div., Standard Packaging Corp., Sheldon Springs, Vt.; presented by R. L. Weldon, chairman, Bathurst Power

J. McK. Limerick
Retiring Chairman

Douglas Jones
Executive Secretary

& Paper Co., Ltd., Montreal.

C. Howard Smith Medal: Awarded to J. Friese, Consolidated Paper Corp., Ltd., Grand Mere, Que.; presented by Roy Crabtree, chairman, Howard Smith Paper Mills, Ltd., Montreal.

Gadget Competition Awards: Awarded to E. Forbes, Hinde & Dauch Paper Co. of Canada Ltd., Toronto, and M. Wall, Ontario Paper Co. Ltd., Thorold, Ont.; presented by M. G. Christie, President, National Business Publications. In Mr. Wall's absence his award was accepted by J. M. Cairnie.

Soviet Pulp and Paper Industry

The members of the nine-man Canadian delegation which toured the pulp and paper industry of the USSR presented a panel discussion summarizing their observations and conclusions. The delegation consisted of: S. E. Williams, vice president and general manager, St. Lawrence Corp., Ltd.; E. W. McBride, vice president (Manufacturing), Abitibi Power & Paper Co., Ltd.; P. A. Harakas, chief engineer, Ontario Paper Co., Ltd., Quebec North Shore Paper Co.; G. D. Hughson, director, Gatineau Div., Industrial Cellulose Research, Ltd.; H. S. Spencer, manager of the Beauharnois Mill, Howard Smith Paper Mills, Ltd.; J. McK. Limerick, research director, Bathurst Power & Paper Co., Ltd., 1959 chairman, Technical Section, C.P.P.A.; J. L. Keays, superintendent of Research & Development, McMillan, Bloodel & Powell River Co., Ltd.; Douglas Jones, executive secretary, Technical Section, C.P.P.A.; and F. A. Price, technical editor, Pulp & Paper Magazine of Canada.

They spent the last three weeks of October 1959 in Russia, during this time they travelled 5,000 miles and visited the following Russian cities and their environs: Moscow, Leningrad, Kazan, Gorki, Kiev and Lvov. A precis of each speaker's remarks follows:

General Remarks

—J. McK. Limerick

In assessing Soviet industry it is well to remember that the present republic is only 42 years old. And within this time it has been subjected to a revolution and several wars. During World War II half of European U.S.S.R. was occupied by German armies. The mills in this area were either destroyed or completely dismantled by the Russians and sent east into the Urals. In other instances, the mills were dismantled and sent to Poland or Germany by the occupying forces. As a result, the entire Russian industry has been rebuilt since 1946.

As a general impression, the Russian pulp and paper industry is perhaps 20 or more years behind ours in equipment and manufacture. We believe that this situation will be quickly changed.

The educational qualifications of the engineers and scientists are of a high order. The reason the mills are out of date is simply a lack of priority in allotment of funds for modernization. As the Russian people acquire more consumer goods, the need for packaging goods has been recognized and more funds for construction are now available.

Based on 1958, the Russians will, by 1965, increase their paper output by 159 per cent, pulp output by 231 per cent, paperboard production by 400 per cent, and building board production by 834 per cent.

Russian pulp and paper officials are aware that their mills are out of date. We were shown plans for modernization. Their plans reflected modern industrial standards using high speed machines and modern techniques.

Russia has a population of 209 million people. But its pulp and paper output is about one third that of Canada. Per capita consumption of paper products is 30 lbs., as compared with 300 lbs. for Canada and 400 for the U.S.

Although the industry will grow to several times its present size by 1975, we were told that local requirements would prevent Russian mills from competing in world markets.

Groundwood Pulp

—S. E. Williams

Groundwood pulp was made in three mills we visited. Some of the grinders were of a very old type. New installations, with increased capacity, are planned.

Wood used in the groundwood mills was of good quality. Walking in the mills was hazardous and I saw many potential causes of accident. The lighting was bad, the floors were poor, but the housekeeping was good. A newsprint mill we saw was spotlessly clean. Many women were employed in the mills.

The pulp stones used for grinding were mainly rather amateurish, home-made, and having a short life. The pulp stock they produced was not of the best quality.

Sulphite Pulp

—Dr. S. L. Keays

There was nothing particularly unusual or noteworthy about the processing in the sulphite mills. They are generally small, low in productivity, and a good many years behind modern western sulphite mills. There is, however, a major modernization and expansion program under way and by 1965 the Russians expect to have a number of sulphite mills with up-to-date equipment.

Shorter cooking time, increased automation, and improved quality of product are some of the immediate goals of the mills. There is a keen interest in high-yield pulping, but to date there are no such installations in the U.S.S.R.

It is common practice to recover

potable alcohol from the waste liquids of the sulphite mills.

Kraft and Semi-Chemical Pulp

—J. McK. Limerick

The kraft mills visited were, generally speaking, representative of Canadian mills of about 20 years ago. Although not up to modern Canadian standards, the pulp appeared to be adequate and suitable for the grades of paper manufactured. Plans are under way which will shortly bring their output up to North American quality standards.

Dissolving Pulp

—G. D. Hughson

The group visited one dissolving pulp mill. The pulp was comparable to a low grade North American pulp except that the incidence of impurities was high.

Newsprint Industry

—E. W. McBride

The present capacity of the Russian newsprint mills is 440,000 tons a year. By 1965 it will be 1.1 million tons annually.

Machine speeds are generally slower than in Canada but will be increased. Generally, the auxilliary equipment was not modern.

Little information was available on newsprint quality. What we saw would rate as "poor to fair" by our standards.

Fine Paper

—H. S. Spencer

I visited a number of Russian fine paper mills in 1936. The condition of the mills now, as compared with 23 years ago, shows some improvement. But I saw no evidence of outstanding advances in their methods of manufacture.

Operators are well educated technically, well-informed, and with a desire to advance their industry. It is quite likely that they will make steady, and possibly rapid, progress in the next few years.

Kraft Papers

—S. E. Williams

Russian kraft mills manufacture a wide variety of products. Their techniques are somewhat different from ours, not given to uniformity and quality in the end product, except in the case of condenser paper which is of good quality.

We saw kraft paper made for conversion into multiwall bags for fertilizer, cement, and, strange as it may seem, for mail. Although the daily output was one million bags the plant had only one automatic stitcher. There were 200 girls operating sewing machines on the balance of the output. Many of these operators will shortly be replaced by automatic stitchers. Plans are under way to triple the mills' output by 1965.

Paperboard

—J. McK. Limerick

Such boxboards as we saw were not of high quality. The container industry in Russia is extremely small in relation to its population and requirements. Until recently, the great bulk of containers were created of wood. It is now proposed to increase the paperboard container industry many times over.

Building Board

—G. D. Hughson

We saw samples of modern developments in building boards at an exhibition in Moscow. But the only board we saw being manufactured was conventional insulating board and hard board. They were made from sawmill residue, knots, and pulping rejects. The equipment was adequate and made a reasonable product.

Design and Engineering

—P. A. Harakas

Russian pulp and paper mills vary in age from 5 to 100 years. Since 1950 some priority has been given to improving existing facilities and adding new production units.

Most construction methods and techniques may be considered adequate. New projects are being built with dispatch employing modern techniques and equipment.

Equipment in the mills was generally of pre-war European or North American design. Some machines are Soviet-made copies of such designs. In most instances, machines are being operated at original design rates. In some instances, modifications have increased production rates from 10 to 30 per cent.

Research and Education

—Dr. J. L. Keays

Research in Russian pulp and paper is considerably ahead of applied technology. There are at least 8 centres doing some phase of pulp and paper research.

Chief criticism of Russian pulp and paper research is that: productivity per man appears low; laboratories generally are crowded and inadequate; some projects are more in the nature of technical services; and much of the equipment appears to be below western standards. But the quality of research in this field appears generally high and the people in charge are knowledgeable. Expansion of the industry will not be retarded by lack of research facilities or personnel.

The world's largest and best equipped pulp and paper research institute, with pilot plant and production facilities, will be built within the next few years near Leningrad at a cost of $25 million.

Chief complaint of those in charge of research is that their results are not adequately exploited.

In the broad field of wood chemistry, pulp and paper, and forest technology, a single Leningrad academy graduates approximately 1,000 students a year. There is probably an equal number graduating from three other similar institutes.

The training in these institutes is five to six years and it is at the level of a Canadian B.A. We were told that the Soviet Union is presently training and graduating more forest industry technologists than all the rest of the world combined.

Product Marketing

—F. A. Price

Russian pulp and paper marketing falls into two groups: domestic and export.

Selling is not a problem in the domestic market. Each mill is given a production target ear-marked for some specific use. If output exceeds the annual quota, the mill may sell the surplus to Russian customers, unless it is required for export.

Export officials told us that the increased paper output foreseen in the current seven-year plan is intended primarily for the domestic market.

Recently, though, Russia has exported some pulp and newsprint. This, we were told, was largely to obtain foreign exchange as each mill, purchasing equipment outside the country, must produce some of the foreign exchange required for this purpose.

Industrial Relations

—Douglas Jones

There is no unemployment in Russia. The Constitution guarantees the right to work, indeed the obligation to work. It does not include the right *not* to work. There is no un-

employment insurance. It is a crime to strike. Only recently have workers been permitted to change jobs on two weeks' notice.

The Constitution also guarantees the right to rest and leisure, a right increasingly observed with a gradual shift from a 48-hour work week in 1957 to a planned 36-hour week in 1960.

In the paper industry 30 per cent of the workers are women. They are paid the same as men on the same job. Wages run from $90 a month for unskilled labor to $250 for supervisory workers.

All mills are unionized. Labor and management work together with one objective—to increase productivity. Seniority means nothing. Job prerequisites are based on accomplishment, not length of service.

Job standards and industry objectives are prominently displayed. Mills operate 24 hours a day, 7 days a week, with no overtime. A breakdown as the result of carelessness may result in a fine or dismissal.

Mills in remote areas have hospitals and doctors on staff. There is no charge for health services. Sports fields were common. Construction of apartment buildings for workers forms part of each industry's activity. At age 60, men who have worked in factory or office for 25 years are entitled to an old age pension. Women receive the same at age 55. There are also state pensions for injury and disability of workers.

Determining Corrugator Starch Use

W. A. Nikkel[1] **and J. McK. Limerick**[2],
Bathurst Power & Paper Co., Ltd.

Many methods have in the past been used to determine the consumption of starch adhesive in the production of corrugated board. Most of these methods are based on comparing the total square footage produced over a chosen time interval with the total consumption of starch over that same time interval. Such methods can produce dependable average consumption figures but are not sufficiently accurate for a comparative study of starch consumption, with regard to such a variable as machine speed.

The effect of machine speed on starch consumption is something which really only came into prominence with the introduction of the now widely accepted tapered glue-roll speeds. However, where it is now a proven fact that glue-roll controls are saving corrugated manufacturers appreciable sums of money through reduced starch costs, none of the various methods used so far in determining settings for these controls was really capable of establishing ideal tapered speed relationships which would ensure minimum usage of starch under all circumstances. This, it was felt, could best be achieved by a method which would allow the determination of starch consumption per thousand square feet of board produced under any given set of conditions, such as, for example, constant doctor roll opening and varying machine speed or constant machine speed and varying opening, etc.

The basic principle of this method is that of measuring the differential between input and return of starch at the glue pan of a given machine during a *short* time interval, and comparing this amount with the square footage of board produced over that same time span.

Equipment Used

A magnetic flow meter which contains no moving parts and the accuracy of which is not affected by changes in the composition or viscosity of the liquid it measures, was selected for this study. These meters record the flow in gallons per minute but, since they measure total volume, whether it is 100 per cent liquid or a mixture of liquid and air, it is imperative that all air be separated from the starch before metering. This can be done through the use of a so-called air release tank, a standard piece of equipment much used in the petroleum industry.

Installation

Figure 1 is a diagram of the metering installation. The starch which enters the return pump from the overflow in the pan through a connecting hose is, after passing through the pump, diverted to an air release tank by means of a three-way valve mounted in the return line directly above the pump. After the air has been separated from the starch, this starch is then passed through the transmitter part of the flowmeter before re-entering the return line to follow the normal course back to the storage tank.

It is imperative that, while measurements are being made, no other return pump is operating on the same return line, as the air forced into the line by another pump will create undesirable fluctuations in the back pressure in this line. It is also important that the in-flow of starch through the feed line can be depended upon to be constant. This is not quite necessary if a system of two transmitters and a differential recorder is used. Such an installation is, however, quite costly and, with patience and care, reliable results can be obtained with just one transmitter and standard recorder.

Procedure

When the corrugator is stopped, the return flow of starch as recorded by the meter is equal to the in-flow, since no starch is being applied to the board. As soon as the corrugator

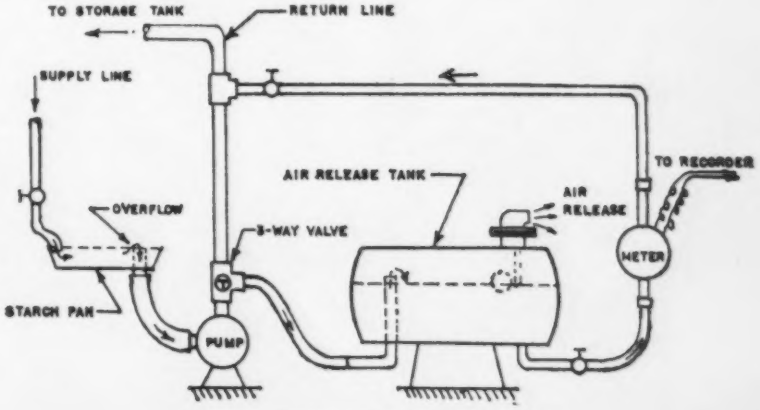


Figure 1. Diagram of metering installation.

1. Research and Development Department.
2. Research Director.

starts running and some starch is therefore being applied to the board, the flow of returning starch will decrease and the difference between this return flow and the known inflow is the actual amount being applied.

Double Backer Glue Machine

After numerous measurement tests it became apparent that when using a tapered speed setting with a ratio of 97 per cent and a negative bias of 24 f.p.m., to which the glue-roll control of the machine in question had been arbitrarily adjusted previously, the average consumption of starch per thousand square feet of board produced at 150 f.p.m. was approximately 50 per cent higher than at 500 f.p.m.

In order to find an explanation for this over-consumption of starch at low speeds, further reasoning was then based on the assumption that the amount of starch picked up by a flute is proportionate to the amount of starch available to that flute on the roll. This theoretical amount of available starch can be expressed as the product of wipe distance and glue film thickness.

Tests indicated an increase of the film thickness on the glue roll with increasing speeds when the doctor roll opening remained constant. This increase in film thickness can be explained by the increased venturi effect in the throat formed by the gap between glue roll and doctor roll. The doctor roll in this instance was geared to run at about 80 per cent of the glue-roll speed. The relation between film thickness and roll speed will be different for each machine, due to differences in roll surface finishes, glue roll to doctor roll ratios, etc.

Single Facer

Measurement tests taken on the single facer (both A and B flutes) with a tapered speed setting of 91 per cent ratio and —14 f.p.m. bias showed the average starch consumption per thousand square feet of board produced to be about 50 per cent higher at 500 f.p.m. than it was at 150 f.p.m. This was the direct opposite from what was found at the double backer glue machine.

The relationship between glue film thickness and machine speed at the single facer was identical to the one found at the glue machine. Following the same reasoning here as was done in the case of the double backer glue machine it was not possible to explain the over-consumption of starch at higher speeds. This reasoning for the glue machine was based on a constant length of contact between flute tip and glue roll and should, when applied to the single facer, operating under the conditions mentioned above, have resulted in finding a theoretical consumption curve similar to the one found for the glue machine. This, however, did not agree with the actual consumption curve established with the flow meter.

Careful testing then showed that the length of contact between flute tip and glue roll at the single facer changes with the speed. Knowing this, the theoretical amount of available starch was again calculated and it clearly indicates that an increase in consumption with increasing machine speed is unavoidable. The answer lies in the increased effect of the bias setting at lower speeds on the actual glue roll to paper speed ratio.

At low speeds the impact between the oncoming flute tip and the glue roll is also very low and perhaps not sufficient to make the flute tip penetrate the glue film completely. Therefore, although the length of wipe is larger at low speeds, the lower pressure exerted on the flute tip and the low impact between flute tip and glue film reduces the ability of this tip to wipe off starch from the glue roll. To equalize the starch consumption over the speed range of the machine again, two approaches were open:

1. Leave the amount of available starch the same for low speeds, decrease it for higher speeds and maintain normal doctor roll openings.
2. Leave the amount of available starch the same for high speeds, increase it for lower speeds and operate with smaller doctor roll openings to reduce overall consumption.

Of these two approaches the latter is impractical. The main reason here is also that it is undesirable to run with very small doctor roll openings from a purely mechanical point of view. Furthermore, to increase the amount of available starch at low speeds only, an increase in the negative bias will be required which will have the effect of moving the dip in the curve towards a higher machine speed. With this dip being in a higher speed range, there is a good chance of the actual consumption curve following the same trend.

Conclusion

Although this method of starch consumption determination is basically simple, anyone interested in conducting a study such as described herein should, in the initial stages, be prepared to spend considerable time in learning how to correctly interpret the recorder readings. This also involves tracking down causes of flow fluctuations for which, when they first occur, there may not seem to be a logical explanation. Concerning tapered glue-roll drives, it has become quite apparent after this study that, in order to be assured of an economical and consistent starch application, such drives must be capable of maintaining their settings within very close tolerances. Especially in the ratio setting of a tapered speed drive even very small fluctuations are undesirable, as they will cause considerable variation in the starch consumption.

Comparison of Pulps From Direct and Indirect Kraft Cooking

B. G. Klowak,
Assistant Technical Supervisor,
Marathon Corp. of Canada Ltd.,

Although there seems to be a fair amount of published literature on the comparison of direct and indirect kraft cooking, there is, indeed, hardly any which specifically deals with a comparison of pulp quality for these two methods of cooking. One reason for this may be that quality has played a lesser role in the industry during former years than it does today. Another reason would be that such comparisons must be carried out on a commercial scale and these invariably present more difficulties than those performed in the laboratory under closely controlled conditions.

From a study of plant records on six months of operation on each type of cook, one team of investigators (1) reported a higher tear and better pulp uniformity for the indirect cook. This investigation, however, was carried out on southern conifers and could not be considered to be totally applicable to our conditions. Other

investigators (2, 3) on the other hand, treated the subject in a more general way, and in general infer better pulp uniformity from liquor circulation in the case of the indirect cook.

The problem, no doubt, is somewhat different in each mill as it is dependent on factors such as operational procedures, type of equipment, and a multitude of other local conditions. The findings in one mill may not necessarily apply to another mill, and it would seem that each mill has to make its own comparison.

Our mill in Marathon has employed both the direct and the indirect methods of cooking. With increasing emphasis on pulp quality it was decided to carry out an investigation which would compare pulp qualities from these two types of cook.

Results

The results of the investigation carried out on a commercial scale to compare pulp quality from direct and indirect kraft cooking of a spruce and jackpine mixture were presented and discussed in this paper. Pulp properties, which were specifically considered, were—mullen, tear, beating rate, permanganate number level, and permanganate number uniformity.

Over a normal freeness range of 400 to 700 C.S.F. the mullen and tear values were found to be essentially the same for the two methods of cooking investigated. At freeness of 300 C.S.F. or lower, there was some evidence of a higher mullen for the direct cooks and a higher tear for the indirect cooks.

Beating rates, which may be considered as relative measures of refining power requirements, were essentially the same for the two cooking methods. The rates, however, were found to be closely related to pulp permanganate numbers.

For a given alkali charge and a given time-temperature cooking cycle, the direct cooks gave a pulp of slightly higher permanganate number. It was suggested that one of the reasons for this was that the liquor to wood ratios in the final stages of the direct cooks were slightly higher.

Permanganate number uniformity of pulp within a digester was found to be essentially the same for both direct and indirect cooks.

REFERENCES

1. Harper, E. A., Edmonson, N. V., **Paper Mill News, February 16, 1946.**
2. Wilcox, J. M., **Paper Trade Journal, May 23, 1946.**
3. Nolan, J. N., **Paper Mill News, January 10, 1953.**

What Are Your Material Handling Costs?

William W. Hall,
Gaspesia Sulphite Co., Ltd.

Knowing that handling of material in any industrial endeavor represents a large proportion of production costs and aware of the fact that the pulp and paper industry generally does not know what proportion of production costs is involved, the Materials Handling Committee of the Technical Section, C.P.P.A., set out to establish what percentage of pulp and paper production costs should be attributed to handling. It was hoped that, in this way, the committee could instill in management the idea that materials handling is a field in which an increased amount of application of the "science of handling" would yield real dividends.

There seems to be a reluctance on the part of otherwise up-to-date management to consider that the handling function can ultimately be as important to the profit and loss statement as many other functions which are given a great deal of attention. The Materials Handling Committee hopes that the data presented herewith will help to make this point clear.

Method of Survey

The committee thought at first that it would distribute a questionnaire designed to extract information on costs of various handling operations in Canadian mills. Suspecting that this information would not be available in most mills, it was decided that such a survey should be conducted in the mills represented on the committee and that this should be considered representative of the entire industry. Since the managements of the mills represented on the committee have seen fit to send representatives to serve on the committee, and are thus presumably cognizant of the value of sound material handling practices and cost accounting it was felt that the cost data would be readily available. Needless to say, it was a bit of a shock to find that not even these mills are aware of their material handling costs as is evidenced by the fact that the desired data on costs of handling functions were not available from committee members.

Inasmuch as the application of scientific material handling practices is designed partly to eliminate labor, it was decided that labor costs would provide a suitable yardstick for measuring handling costs. Thus it was decided to conduct a concentrated survey of the proportion of the total labor force that was performing handling tasks in the mills represented on the committee. For the sake of uniformity it was decided to define production personnel so that the handling manpower cost would be expressed as a percentage of production labor charges only. Thus, for purposes of this survey, all employees are production employees, except those engaged in: plant maintenance and engineering, plant stores, personnel relations (including first aid and safety), purchasing, accounting and research.

Value of Survey

Results reported in the table are averages only and should not be considered as being indicative of good or bad handling techniques. If management would conduct this sort of survey in the mills throughout the country, the Materials Handling Committee feels certain that areas would become readily apparent where the application of sound handling techniques would be beneficial.

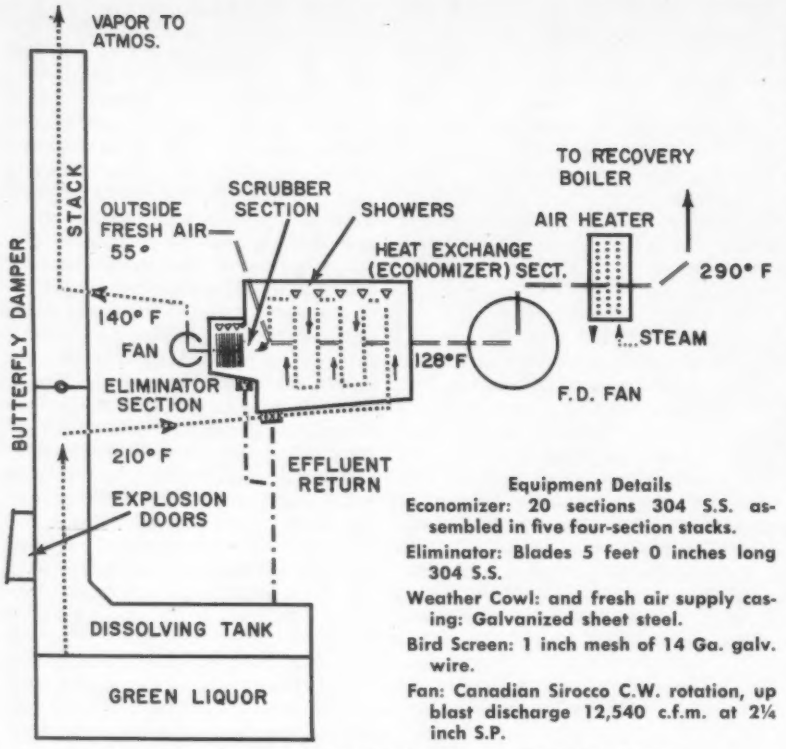
No. of Mills in Survey—10

Average Number of Employees in Production Functions—861

Average Number of Employees Performing Material Handling Functions—378

Percentage of Employees doing Material Handling Work—43.9%

HANDLING FUNCTION	% OF HANDLING EMPLOYEES
Pulpwood	30.4%
Coal	1.7%
Sulphur, Limestone, Saltcake, & Lime	2.1%
Alum, Size, Color, Clay, Misc. Chemicals	2.9%
Purchased Waste Paper	0.7%
Purchased and Own Pulps	2.8%
Cores, Wrappers, Heads	2.2%
Waste Products, Ash, Garbage	6.0%
Process Flow	12.0%
Finished Product Storage	12.8%
Other—General Labor	26.4%



Equipment Details

Economizer: 20 sections 304 S.S. assembled in five four-section stacks.

Eliminator: Blades 5 feet 0 inches long 304 S.S.

Weather Cowl: and fresh air supply casing: Galvanized sheet steel.

Bird Screen: 1 inch mesh of 14 Ga. galv. wire.

Fan: Canadian Sirocco C.W. rotation, up blast discharge 12,540 c.f.m. at 2¼ inch S.P.

Flow and equipment details of Elk Falls economizer installation.

Dissolving Tank Economizer At Elk Falls Co.

T. L. Fenwick and J. W. Thomas,
Elk Falls Co. Ltd.

When the kraft mill at Elk Falls was constructed in 1956, the recovery boiler installed was a B & W unit with a rated capacity of 1,250,000 lbs. of black liquor solids per day. After the initial start-up troubles with the boiler had been overcome, attention was turned to the possibility of more economic operation through the recovery of heat and chemicals being lost at various points in the system. One particular location was the dissolving tank vent stack. Preliminary tests indicated a heat loss of 20 million B.t.u. per hour and a chemical loss of 800 lbs. per day.

Early in 1959, installation of an economizer unit designed by Ross Engineering was commenced and this was put into operation near the end of April 1959.

Description

The exhaust vapor is deflected from the dissolving tank stack by a damper to the plenum below the economizer chamber which carries the vapor vertically over the heating surfaces five times, through the scrubber showers, and into the bladed eliminator section. The fan discharges the cooled vapor through the top plenum to the stack, from which it is vented to atmosphere. The cold combustion air makes a single pass through the vapor-heated economizer section and is drawn into the forced draft fan.

The main component of the unit is a five-pass economizer consisting of 20 standard sections (four sections per pass) prefabricated from Type 304 stainless steel.

Ten nozzles in the top of the economizer section spray weak wash (filtrate from the causticizing plant also used in dissolving smelt) on the heating surfaces to minimize chemical build-up. This effluent, containing condensed vapor and chemical, drains to the bottom of the chamber and returns to the dissolving tank through a four-inch pipe.

The vapor from the economizer passes into the stainless steel eliminator chamber which is fitted with blades, each five feet long. The blades are designed to change vapor flow direction in order to separate entrained droplets from the vapor entering the fan. The section of the eliminator chamber immediately after the last vapor pass (scrubber section) is equipped with four hollow-cone type showers. Eight flooding nozzles are fitted above the eliminator blading. The effluent from the 12 showers in the eliminator chamber drains through a separate four-inch pipe, which is connected to the economizer downpipe below the unit.

Each of the three banks of showers mentioned is fitted with a separate valve in order that filtrate flow from the two-inch supply line may be directed to all or any combination of sections to suit operating conditions. Fresh water is used intermittently to purge weak wash filtrate chemicals and dissolving tank chemicals from the shower nozzles and economizer equipment.

From the eliminator chamber, the exhaust vapors are discharged by a stainless steel fan to the dissolving tank stack, which then vents the vapor to atmosphere.

Economies Obtained

Installed cost of the dissolving tank stack economizer was close to $60,000. Savings in heat and chemical recovery, using the figures obtained on tests during September and October, were as follows:

Heat Recovery:	
In Fresh Air—million B.t.u. per day	161.9
Savings per Day—at fuel cost of 41.1c per million B.t.u.	$ 66.54
Savings per 350-day year	$23,289.00
Chemical Recovery:	
Equivalent Na_2SO_4 per ton of pulp	2.73
Savings per Day—At 1.7c per lb. and 519 tons per day production	$ 24.08
Savings per 350-day Year	$ 8,424,00
Total Savings per 350-day Year	$31,713.00

No value was assigned to the heat recovered in the green liquor since, as mentioned previously, with increased production it has been necessary to cool this system. Main operating cost is power for the economizer fan, which comes to about 60 cents per day, and maintenance costs, which have not as yet been determined. Reduction in fall-out in the mill and surrounding areas and fewer power interruptions due to build-up on the sub-station insulators

is definitely a saving but it is difficult to determine its dollar value. There was also a definite reduction in the odor of the stack gases after scrubbing, although no tests were made to determine the amount.

Operating Difficulties

Main operation problems to date have been the plugging of shower nozzles in the economizer with chemical and some leaks at the joints in the economizer which allowed chemical to get into the fresh air stream. The chemical caused some damage to the fins in the air heater. Recently some further leaks in the economizer have occurred at field-welded joints between the sections of the heat transfer surfaces.

The dissolving tank stack economizer installation at Elk Falls appears to be meeting or exceeding the design estimates for heat and chemical recovery. Some discrepancies in the heat balance on the economizer were found to be due to errors in the wet bulb temperature readings on the stack gas before the economizer due to chemical pick-up on the sock of the wet bulb thermometer.

Thoughts on Paper Machine Pressing

R. W. Sulatycki,
Division Engineer,
Port Alfred Division,
Consolidated Paper Corp., Ltd.

Each time a suction press roll is re-covered its shell thickness is reduced. Rubber is practically incompressible and under pressure flows along the line of least resistance. This results in reduction of open area at the press nip, causes friction between the rubber cover and the felt, and affects their life. It also tends to detach the rubber cover from the shell.

The following factors contribute to better water removal: high unit pressure, low machine speed, hard rubber covers, small roll diameters, high stock temperature, small diameter holes, high vacuum narrow tip and proper design and clean felts. Phenomena taking place at the nip, position of suction box and importance of vacuum are analyzed. Explanation is given as to why small diameter holes and hard rubber covers are advantageous.

Crowned rolls increase cost of rubber cover, distort felt and affect its life, give higher sheet and felt speed at the centre of the roll, produce uneven pressing characteristics along the face of the roll, and cause friction between the top roll and the sheet. They should be replaced by straight rolls used in conjunction with antideflection top rolls.

Eliminate Crowned Rolls

Straight rolls should be used instead of crowned rolls and study and experiments should be undertaken in order to find practical means to accomplish this.

There seems to be no simple solution to permit elimination of crowned rolls, particularly on existing machines, but to offset the similar disadvantages deriving from roll deflection in textile mills, complicated arrangements are used, such as one called the Rodney-Hunt Niptrol mangle. It is adapted for extraction, dyeing, and starch and resin impregnation. Pneumatic pressure on staggered brackets is applied to segmented rolls, which distribute total pressure over the entire length of the upper roll, the bottom roll resting on two, large-diameter cradle rolls.

Application of such an arrangement to the paper machine presses would lead to a very complicated design. It could, however, be somewhat simplified by using a straight rubber-covered bottom roll, supported by a crowned roll to prevent deflection and another crowned pressure roll above the straight top roll to counteract bonding, caused by pressure exerted on the journals. Four rolls would be used instead of two. This would provide a good but costly arrangement which would still not be ideal.

Minimizing the Disadvantages

To minimize disadvantages of the crowned rolls, the following is of note:—

Some years ago, Black-Clawson advertised crownless press rolls, consisting of an outer cast shell, shrunk onto a heavy cast core. Both core and shell are made of ductile iron. The outer shell is supported by the inner core at approximately the centre section of the roll. The two cantilever end sections of the shell are almost without deflection. Only the central core member, which is a long beam, deflects under load.

The manufacturers stressed that such press rolls should be operated in pairs. Their deflection is normally within .001 in. and they produce a uniform nip width for all loadings. But, they cannot be provided with suction boxes, and their application is limited to size and smoothing presses. It is worth while to mention that, according to Black-Clawson, in a Chicago mill where the first pair of crownless rolls was put into operation in 1950, the roll grinding period had been extended from 3 weeks to 9 months.

Although not mentioned by the manufacturers, it would seem to be a simple matter to apply this principle of crownless, non-deflecting rolls to the top press position only. Such a roll placed on top of a bottom, straight roll would deflect under its own load and under the pressure exerted on its journals by usual means, and transferred to the centre of the roll. It would deflect downward, not upward as do existing rolls, and exert a practically uniform pressure on the bottom roll.

Crownless granite and stonite top rolls were tried out by C.I.P., Three Rivers, and encouraging results were obtained in respect to greater uniformity of pressing, higher dryness of sheet and reduced steam consumption. Application of such rolls was limited because the manufacturers were unwilling to assume any responsibility in the event of failure due to the risk involved. However, there should be no difficulty in designing a hard, rubber-covered, steel, anti-deflection roll, and only such rolls should be considered for future purchase.

Both cantilever portions of the roll must be made flexible and with cross sections carefully calculated so that deflection of the roll corresponds to average nip pressures and normal deflection of the bottom roll. If it is too flexible, there will be higher pressure at the centre of the roll, if too stiff, the ends of the roll will be pressed too much.

However, both the bottom and the top roll deflect in the same direction, and variations in pressure caused by changes in load applied along the nip would be minimized and would not be as pronounced as they are now with crowned rolls. This seems to be the simplest, least expensive, and most practical solution, as it does not

require any change to the machine frames nor to any part of the press section. Such an arrangement would be most advantageous if a large diameter bottom roll, with a hard rubber cover is used.

Larger Diameter Rolls

Large diameter rolls, being stronger, deflect less even at higher nip pressures and a harder rubber will deform less than a soft rubber and its flow will be more restricted. This should reduce friction between the rubber and the felt and as a result longer felt life could be expected. At the same nip pressure per linear inch, increase in roll diameter from 10 inch to 20 inch will result in an increase of nip width from 1 inch to 1¼ inches and at the same time the pressure at the centre of the nip will decrease from 125 p.s.i. to 100 p.s.i. The stronger roll will, however, permit application of a correspondingly higher nip pressure, and wider nips will provide a longer squeezing time.

Non Parallel Top Roll

Not recommended for permanent application but for experimentation purposes only, installation of a stright top roll, not parallel but at an angle to the straight bottom roll, could be tried out in order to replace partly, or entirely, crowning of the rolls. A simple screw arrangement could be used to change this angle in order to meet varying requirements.

It so happens that, due to improper adjustment or some mechanical defect, the top roll sometimes takes such a position and remains in operation for some time unnoticed, and this does not affect the sheet or operation. If required, the angle could be reduced to about 42 minutes if the top roll is provided with a small crown of ⅛ inch on diameter.

In the September-October 1958 pamphlet "The Bearing Engineer" published by The Torrington Co., there appears an article describing such an arrangement. It is used for the calendering of plastic sheets and of coated rubber products, and pressure applied is occasionally as high as 500,000 lb.

It seems that, due to vacuum and a higher friction between the rubber and the felt as compared to that between the paper sheet and the top press, there is a sliding of the sheet relative to the top press, rather than the felt in relation to the bottom press. Therefore, a gradual reduction of the crown on the bottom roll, with increased crown on the top roll, could be tried out.

Crowned Shell

Should none of these suggestions be acceptable and crowning of rolls still found to be necessary, then rolls with crowned shell and a uniform thickness of rubber cover on the entire length of roll should be used. Fabrication of such rolls should not present any difficulty, although they may be somewhat more costly. In this way, at least cost of initial grinding could be avoided, and uniform pressing characteristics across the machine could be assured. Circumferential speed would still be different at various points of the nip with this design.

Formation Tester Graphically Records Paper Structure

G. Burkhard,
Ontario Paper Co., Ltd.

P. E. Wrist,
Mead Corp.

G. R. Mounce,
Electronic Associates, Inc.

The development of a formation tester for analyzing the structure of a sheet of paper was described. This instrument measures and records the distribution of spacings between floc centres in the machine-direction and cross-direction respectively and provides a signal at any given spacing whose amplitude is the product of the number of such spacings and the relative intensity of the corresponding floc above its immediate surroundings. A graphical record of the paper structure is obtained for permanent reference. The graph supplies information on a spectrum of floc separation from 4-inches to 0.013-inch. General indices of the uniformity of the sheet, of predominant floc size, and of intensity of wire mark may be readily obtained from the curve.

The presence of streaks, felt marks, press marks, and other discontinuities is immediately apparent on the graph. The instrument has been used to evaluate papers ranging in substance from 18 to 150 lb. basis weight and from bible paper to 9-point corrugating stock. Particular attention is given to its application to newsprint.

New H&D Test Predicts Stacking Strength of Corrugated Containers

Henry J. Ostrowski,
Technical Director,
Hinde and Dauch Paper Co. of Canada, Ltd.

During recent years, users of corrugated containers have been specifying higher stacking strength requirements. In order to comply, liners and medium are now being made to meet certain rigidity specifications. For many years the ring crush value has been generally recognized as the basic rigidity property of corrugating medium and when related to the box compression test has been used for evaluating stackability. However, it received only relucant acceptance in the industry because of its sensivity to the method of cutting and handling the test specimen, and could only be carried out with a fair degree of reproducibility even after standard conditioning. It was therefore unsuitable for routine control purposes in the mill.

It was for these reasons that the Hinde and Dauch Paper Company of Canada, Limited, several years ago, undertook an investigation into the feasibility of developing a more reliable stiffness test. Coming out of the extensive work carried out, a new test has been conceived—the "H&D Stiffness Test." The procedure for conducting it was found to overcome the inherent weaknesses of the ring crush method as well as to produce a higher degree of correlation with

the top-to-bottom compression value for the box.

Three Main Advantages

The new technique has been found to possess three main advantages over ring crush:

1. The geometric configuration and orientation to stress on the specimen when under test, simulates that which the medium presents as it is set up in the top-to-bottom compression testing of the corrugated container.

2. The test specimen holder possesses a uniform clamping pressure and automatically compensates for media of varying calipers.

3. The effect of any thermosetting properties which the medium may possess as developed by the corrugator is included in this evaluation.

Practical application of the new method has been confined to corrugating board on which it has been used for control purposes in the mill, as well as a method for routine evaluation of material by the central container-testing laboratory. Currently, studies are underway to determine the usefulness of a modification of the test as a control stiffness guide when used on linerboards.

Description

The holder is made of lightweight aluminum alloy. It has two clamping jaws, the exposed surfaces of which, when in contact, conform with standard "A" flute corrugations. It includes five springs which are so arranged that, on opening of the lever, two springs retract the jaws, and, on closing, three springs close the jaws and exert a constant clamping pressure on the test specimen. Thus, provision has been made to compensate automatically for caliper when testing boards of various thicknesses. The thickness of the jaws is ¼ inch and the unsupported length of the material exposed to testing is likewise ¼ inch. The holder has been designed so that the specimen may be prepared in conformity with procedures employed when using the strip cutter for the Concora fluter followed by the H&D crush tester. All are used in conjunction with this test.

Procedure for Corrugating Medium

1. Carefully cut a sample strip of paperboard 6 inches by ½ inch (exact as to dimensions) in the machine direction.

2. Pass it through the Concora fluter as for the Concora test.

3. Insert the fluted strip edgewise in the H&D stiffness test holder so the flutes conform exactly with the fluted jaw faces and close the lever so that the sample is kept securely in position.

4. Immediately place the holder containing the sample in the H&D crush tester, having the holder lying flat on the bottom plate of the tester with the sample standing in the vertical position, having its edge exposed to contact the crush tester's upper plate.

5. Test and note on the dial the point of failure occurring at the sudden collapse of the flutes.

6. Record H&D stiffness C.D. (cross-direction)——lb.

Results

Test results indicate that the new H&D stiffness test has at least twice the degree of precision in reproducibility as the standard ring crush test.

The new H&D stiffness test has been incorporated into the standard mill specifications for all corrugating medium and has been in use now for almost a year as a mill control test.

The results of the tests by the new technique have been used as a guide in mill investigations and research. Pulp mill operation, insofar as cooking chemicals and conditions as well as the refining are concerned, have been set at optimum levels to produce a corrugating medium possessing a high degree of H&D stiffness with resultant satisfactory compression test being developed when the material had been converted into boxes.

For the past year the central container testing laboratory has been using the stiffness results as obtained by the new method for predicting the stacking strength of corrugated containers. In order to adapt the H&D stiffness test to fit the design of the well-known box strength calculator, the following empirical relationship has been found:

$$\text{H\&D stiffness - C.D. - lb.} \times 0.57 = \text{C.D. ring crush - lb.}$$

This new H&D stiffness holding device (Patent pending) is being made available to the industry by writing to the Container Testing Division, Hinde and Dauch Paper Co. of Canada, Ltd., Trenton, Ont.

New CPPA Top Executives

George S. Currie, president, Bowater Corp. of North America Ltd., was elected chairman of the Executive Board, Canadian Pulp and Paper Association at the annual meeting on January 29. Mr. Currie succeeds as chairman, V. E. Johnson, president, Canadian International Paper Co., who becomes a vice chairman of the board. Also appointed a vice chairman was G. M. Hobart, president, Consolidated Paper Corp.

Mr. Currie, is a chartered accountant, business leader and former federal deputy minister. The Bowater Corp. of North America, of which he is president, is the administrative and holding company for North American units of the world-wide Bowater organization.

Mr. Currie was born in Glencoe, Ont. After graduating from McGill University in arts he was employed with the chartered accounting firm of George C. McDonald Co. He became a partner in 1914. The firm of McDonald, Currie & Co. today operates across Canada and has associates in the United Kingdom and the United States.

He entered the Bowater organization when he became a director of Bowater's Newfoundland Pulp and Paper Mills, Ltd., Corner Brook, in 1938. He later became president. On organization of the Bowater Corp. of North America, Ltd., in 1952 he became vice president and a director. He relinquished his post as president of the Newfoundland company, although remaining a director, in 1957 on becoming president of the North American corporation. He was president of the Bowater Power Co., Deer Lake, Nfld., on its inception in 1955, and remains a director. He is also a director of Bowaters Mersey Paper Co., Ltd.

G. S. Currie

Canadian Industry Progresses, Faces Up To Economic Problems

R. M. Fowler,
President,
Canadian Pulp and Paper Ass'n.

The past year witnessed, month by month, a steady increase in output of virtually all the products manufactured by the industry. The 1959 production was some six per cent higher than in 1958 and marginally exceeded the all time record high established in 1956. Although the total capacity of the mills increased during the year by some two per cent, the demand for pulp and paper increased to a slightly greater degree. Thus, as the year drew to a close, the reserve capacity of the industry was considerably lessened.

The past 12 months were reasonably satisfactory for the industry even though it was adversely affected by exchange losses on sales in U.S. dollars, by a continued rise in costs, and by operating on the average at only slightly higher than four-fifths of capacity. In the face of such problems, the mills displayed much resourcefulness that manifested itself in increased efficiency in cutting and moving the pulpwood harvest and in the technical complexities of the manufacturing processes.

Although the output of the mills is increasing, Canada is not maintaining its former share of the growing world market. This is owing in part to the scarcity of dollars overseas and in part to a return to normality following the pulp and paper shortages of the post-war years. These shortages resulted in a worldwide expansion of the industry, an expansion that slowed down considerably in 1959.

Of note in the past 12 months is an apparent greater public understanding of the fact that the maintenance and development of this industry's world trade is vital to the economy. A manifestation of this greater understanding occurred in

R. M. Fowler

July when the Parliamentary Committee on Mines, Forests, and Waters published its report recommending many measures to help the forest industries in meeting their competitive position in world trade. These included federal aid in marketing; the elimination of discriminatory taxation; and federal assistance in forest fire protection and in the development of forest access roads. Regarding these and other recommendations, the Parliamentary Committee pointed out that "the forest-based industries are paramount" in the economy and that government spending for defense, national development, and social services "cannot be maintained if we lose the great tax source provided us by the forest industries." Fortunately, it was recently announced that the federal government plans to create a new department which will concern itself with the forests. Thus in future, the forest industries should receive from the federal authorities the interest and attention that their importance merits and requires.

Pulp Production

The total wood pulp produced by the mills last year was fractionally higher than the record established in 1956 and was some six per cent higher than in 1958. Approximately 77 per cent of the total output was used at home in the manufacture of newsprint, other papers, and paperboard. The consumption of pulp for these purposes was about five per cent above the 1958 level. In addition, pulp exports, which account for 23 per cent of the total output, were 11 per cent higher than in the preceding year.

Newsprint

Production of the newsprint mills in 1959 was nearly five per cent higher than in 1958 but was still slightly below the peak established in 1956. However, in the closing months of last year, the newsprint industry was breaking all past records. In the United States, which absorbs four-fifths of the output of the Canadian mills, consumption in 1959 jumped by 7.6 per cent, or 500,000 tons, as compared with 1958. Canadian shipments to that market increased by some 300,000 tons to a total of 5.1 million tons as against 4.8 million tons in 1958.

Domestic consumption of newsprint increased sharply during the year and almost reached the peak level of 1956. Domestic consumption now accounts for about 7.4 per cent of the output of the mills, a slight increase from the preceding year.

Owing to the expansion of the U.S. newsprint industry, particularly in the last four years, the Canadian mills have supplied a smaller proportion of the demand in that market. In 1959 Canada supplied 71 per cent of the newsprint requirements of the United States, as against 73 per cent in 1958 and, indeed, 82 per cent in 1946. Thus, Canada's share of the U.S. market has returned almost to the 1935-39 level, before war and post-war difficulties shifted

From the annual report of the Canadian Pulp and Paper Ass'n.

the flow of trade. All of which would indicate a return to normality—if there be any such thing—rather than any adverse trend. In fact, in the fast-growing U.S. market, the Canadian mills supplied more than half of the increase in the demand in 1959 and they expect to supply a reasonable proportion of the looked for increase in U.S. consumption in 1960.

Despite major increases in capacity and production in Scandinavia and elsewhere, Canadian newsprint shipments to markets overseas increased by over six per cent in the past 12 months. The vigorous increase in world newsprint demand in general and in North America in particular that was experienced in 1959 gives every indication of continuing in the coming year.

Other Papers and Board

Of the industry's total production of more than 11 million tons in 1959, about 1.9 million tons consisted of paperboard and paper other than newsprint including fine, book, writing, wrapping, and building papers and board. Because practically all these products are subject to tariffs in foreign markets, only about ten per cent of the total output of these products moves abroad.

The paperboard mills of Canada increased their 1959 output above the 1958 level by five per cent and established a new production record. Although the industry is experiencing increasing competition from many new packaging materials, the output of practically every variety of containerboard, boxboard, and all other grades increased during the year. However, there was some decline in paperboard exports. Despite increasing competition from other packaging methods and materials, since 1954 the output of the paperboard mills increased by close to 30 per cent.

Production by the fine paper mills and manufacturers of other grades of paper generally follows the level of commercial activity in Canada and thus in 1959 the output of fine papers in Canada increased sharply. Production was about nine per cent above the 1958 level. Wrapping paper production was up by some ten per cent and there was an increase also in the output of tissue papers and industrial papers and board.

Research and Development

The year was one of consolidation in research and development activities. Our central Research Institute felt the impact of economies adopted during the period of over-capacity in the industry. Yet, despite restricted budgets good progress was made in adding to the fundamental knowledge and understanding of the processes we are using. Application of such knowledge gained in earlier years was reflected in improvements of equipment and procedures and in the modernization of plants.

Early in the year, the newsprint producers began to reap the benefits of the investigation on wire life carried out jointly through the Research Institute. Much progress was made in the extension of high yield sulphite pulping procedures and at one of the kraft mills the new method for anodic protection of digesters from corrosion moved closer to successful full-scale use.

The technical feasibility of moving chips in water through a pipeline over long distances was demonstrated and the detailed report of this work will be a feature of the coming Woodlands Section annual meeting.

In December the acceptability of the Atomized Suspension Technique for disposing of sanitary sludges at Beaconsfield, P.Q., was announced. This brought much favorable comment concerning the industry's progressiveness in contributing this new process to the alleviation of a world-wide problem. The process has been made available on a royalty-free basis to Canadian governments and municipalities for the disposal of sanitary wastes.

In view of the growing competition which our industry now faces from other countries, it is evident that our research should be intensified on all fronts in the years immediately ahead.

Association Activities

Once again, there has been an increased interest and attendance at association meetings and increased activity on the part of the 20 sections, departments, and committees that comprise the association. The work of the sections is summarized herein in the reports of their chairmen.

The work of the association has developed, broadened, and I believe become increasingly useful owing to the efforts of some hundreds of member company officials who have been more than generous in devoting their wisdom, energy, and time to benefit the industry as a whole. On behalf of the association and its member companies, I extend to them the warmest and most appreciative thanks. I thank, too, the officials and

PRINCIPAL STATISTICS
Preliminary 1959 figures

	Production		Exports	
	1959	1958	1959	1958
Gross value of output	$1.5 billion	$1.4 billion	$1.1 billion	$1 billion
	Tons	Tons	Tons	Tons
Total wood pulp	10,639,529	9,995,983	2,460,133	2,213,692
Dissolving & Spec. chemical	363,569	306,551	308,785	248,789
Bleached sulphite	539,651	553,775	333,061	349,191
Unbleached sulphite	1,574,404	1,558,383	185,032	209,424
Bleached kraft	1,308,839	1,118,627	1,036,061	880,669
Unbleached kraft	955,127	833,862	313,335	259,353
Other chemical	250,033	235,463	39,292	32,343
Groundwood	5,584,612	5,323,946	238,105	226,498
Newsprint	6,394,172	6,095,553	5,952,704	5,609,024
Containerboard	520,045	486,513	59,885	50,531
Boxboard	433,335	420,258	16,674	26,497
Total paperboard	953,380	906,771	76,559	77,028
Fine paper	277,734	254,068	17,834	15,873
Coated paper	33,467	30,960	1,191	1,227
Other printing paper	103,521	91,636	71,609	63,820
Special papers	132,304	128,357	3,919	3,785
Wrapping paper	318,852	287,927	40,907	28,720

These figures cover only those reported to the CPPA. They account for more than 98 per cent of the industry's output. They do not include defibrated and exploded pulps and a small tonnage of some papers and boards. There are also some slight duplications in the figures. Some paperboard and wrapping paper is used by the mills for packaging. Coated paper covers a tonnage that undergoes a further processing after it leaves the paper machine and thus is also included under other grades. Total wood pulp production includes screenings. In addition to wood pulp, the industry uses annually in the manufacture of paper some 470,000 tons of waste paper, straw, rags, and other fibres.

staff of the association for their earnest and fruitful work during the past year.

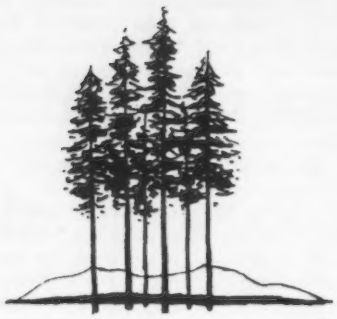
I record here my own thanks and that of the association to Vernon Johnson who, as chairman, gave direction and momentum to our work. Through his illness, we were unfortunately deprived of his unfailing and kindly help during the later months of the year when George M. Hobart, the vice-chairman, took over the arduous responsibilities and tasks of the chairman. To both I am beholden for many personal kindnesses for which I can here only reiterate my indebtedness and gratitude.

Looking Ahead

In the past year, there have been many indications that this industry is adjusting itself to the present highly competitive situation in pulp and paper trade throughout the world. With substantial reserve capacity existing, the emphasis has shifted from maximum production—almost regardless of cost—to operating efficiency and cost control. We have emphasized and expanded our research efforts, both at the mills and in the woods. More attention has been given to improving merchandising knowledge and techniques. Management, at all levels, has worked hard and effectively.

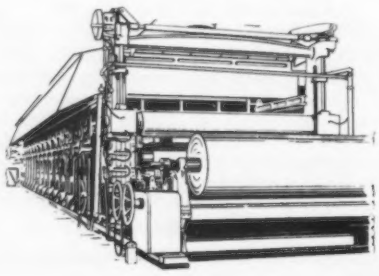
With the world-wide expansion of capacity that has occurred, we will continue for several years to have surplus or excess capacity in the Canadian industry. It will be steadily and gradually reduced, but meanwhile we must continue to emphasize efficiency and cost control and imaginative management in our affairs. We must do even more than we have done to develop merchandising knowledge and skill. And we will have new problems to face and must, during a period of over-capacity, look far ahead and prepare for the time that is coming when greatly increased demands on Canada for pulp and paper products will be made and we will have to provide both increased mill capacity and an adequate supply of trees to feed it. Both mill research and woodlands research must be expanded today, when it may not seem urgent or important, if we are to be ready both in the mills and in the woods, to meet the opportunities we are likely to have 10 or 15 years hence.

Among the new problems this industry will face in the immediate months ahead none are more important than the problems of trading policy in a rapidly changing world.



The development in Europe of the Common Market, the Outer Seven, and the possible development of other regional trading blocs are designed to increase trade between the nations within each group and ultimately world trade as a whole will benefit. As such, they deserve our support and encouragement.

But the danger from regional trading arrangements is also obvious. They can either be a new and important step toward freer trade on a multilateral basis, or they can, while lowering tariffs within each group, raise higher common tariffs against the rest of the world. Clearly, Canada's interest is to do everything possible to bring about the first of these alternatives. At the moment it is quite clear that our export markets for paperboard and grades of paper other than newsprint will be adversely affected by the Outer Seven arrangements which will reduce and ultimately eliminate our existing tariff preference in the United Kingdom. There is also a real danger that tariffs will be imposed on newsprint and pulp by the Common Market countries of Europe, where in the past, these commodities have generally moved freely in world markets. The critical choices of policy will be made in the next few months and will affect, for better or for worse, Canada's trading prospects for years to come. It is vitally important that this industry, together with other exporting industries and, I hope, fully supported by the Canadian government, should do everything in our power to influence the decisions of the Europeans trading groups in the direction of maintaining and expanding international trade. Indeed, I would go further myself and suggest as I did in March 1958 in a speech to the International Chamber of Commerce, that Canada, in co-operation with the United States, should "seek economic interdependence within the North Atlantic community through free trade achieved gradually over a term of years."



Our efforts are needed now while the European Common Market is debating its external tariff policy. They will be needed also next September when another conference of the member nations supporting the General Agreement on Trade and Tariffs will be held. Canada has greatly prospered under the GATT and its efforts to build a freer multi-lateral trading world. In recent years, there has been some evidence that Canadian confidence and enthusiasm for the GATT approach have been waning. I suggest that it should be revived and strengthened. We may be standing at a point of crucial importance in Canadian economic and political history.

The decisions taken during 1960 on Canadian trading policy will most probably affect our trading chances for decades to come. If we continue to have as our central objective the expansion of trade along freer, multilateral lines, the trends of world demand for pulp and paper will open brilliant opportunities for this industry. A recent conference under the auspices of F.A.O. estimated that world demand for paper (including newsprint) and paperboard, which in 1955 totalled 56 million metric tons, will rise to 88 million tons in 1965 and to 134 milion tons in 1975. Canada can share in this spectacular increase of demand, provided we prepare to meet it and provided we do not face a world that has shackled itself by restrictive tariffs and other obstacles to international trade.

The basic forces are working in our favor. These include increasing world literacy and industrialization (for both of which increased supplies of pulp and paper are essential); the awakening of Asia; and an immense growth in population.

Sooner than we think, our industry must face the results of the triple explosion in world literacy, in world industry, and in world population. From these must flow an even greater explosion in the demand for pulp and paper. In brief, then, there will be brilliant opportunities for the industry tomorrow provided our operations today are girded with wisdom, confidence, and vision.

PJT NEWS OF SUPPLIERS

F. W. Hooper

R. R. Willis

Ross Engineering of Canada, Ltd., announces the retirement on January 1 of F. William Hooper, who has served as vice president and general manager of the company since 1935. He has been succeeded by Ralph R. Willis.

Mr. Hooper joined Ross Engineering as a salesman in 1932 and was named operating head of the company three years later. A native of York Harbor, Newfoundland, he received his education in England and returned to Canada in 1919 to take a position as a chemist with Pacific Mills, Ltd., a subsidiary of Crown Willamette Corp. He served that company for 13 years before joining Ross Engineering. Mr. Hooper will remain with the company as a director and will act in a consulting capacity.

Mr. Willis joined the company in 1936 as a draftsman, became chief engineer in 1945, assistant general manager in 1955, vice president in 1959. He is a graduate in civil engineering from the University of New Brunswick and of the Engineering Institute of Canada.

Smith & Winchester Co., South Windham, Conn., announces the appointment of Dudley H. Geigenmiller as design engineer specializing in the design and development of Rotary Precision Sheeters.

Mr. Geigenmiller is a graduate of Tri-State College with a mechanical engineering degree.

Catalin Corp. of America has named John N. Guidice a sales representative for the Resin and Chemical Division. He will be located in the firm's Chicago office at 221 North LaSalle Street and will cover resin accounts in the Midwest.

Educated at Rutgers University, Mr. Guidice has been associated with Catalin at the company's Fords, N. J., plant since 1955. He will be mainly concerned with acrylics and other liquid resins in Catalin's broad line for use in the paper, textile, leather, and other industries.

John B. Chandler Co., Atlantic Beach, Fla., has appointed A. J. Rourke as a sales representative. Mr. Rourke will cover the Southwestern states, from Alabama through Texas.

Mr. Rourke is a lifelong resident of Georgia and Florida. He has been selling mechanical equipment in this area for the past 13 years.

The John B. Chandler Co. serves the South as exclusive sales agent for Scapa Dryers, Inc., Cincinnati Rubber Mfg. Co., and A. F. Wagenknecht Co.

A. J. Rourke

R. G. Betts

W. & L. E. Gurley of Troy, N. Y., America's oldest manufacturer of engineering and scientific instruments, elected Robert G. Betts president at a meeting of the board of directors. Mr. Betts is the sixth president in Gurley's 115-year history. He also continues as treasurer.

Lester C. Higbee, who served as president for eight years, was named vice chairman of the board; and was re-elected president of Precision Instruments Inc., a wholly owned Gurley subsidiary which imports and distributes instruments of foreign manufacture.

Charles E. Smart continues as chairman of the board, a post he has held since 1952. M. Scott Dickson was re-elected vice president; and Daniel Harkness, secretary. Mr. Dickson was also elected to the ten-man board of directors for the first time.

Prior to his election as president, Mr. Betts had served for eight years as executive vice president and treasurer. He is a grandson of one of the founders of the firm, Lewis E. Gurley; and is a graduate of Yale University, Class of 1927. He also attended Harvard Business School in the Advanced Management Program.

J. Beaumont

L. S. Pearson

A. E. Staley Manufacturing Co., Corn Division, Decatur, Ill., has announced the appointment of James H. Beaumont as assistant manager.

Mr. Beaumont has been public relations director of the Decatur corn, soybean and chemical processing concern since 1955.

John N. DeBoice was named to succeed Mr. Beaumont as public relations director. Mr. DeBoice has been assistant public relations director for the past two years.

Southworth Machine Co., Portland, Me., elected Leslie S. Pearson a vice president at a recent board meeting.

The new vice president, who manages Southworth's new Paper Mill Division, joined the company 18 months ago from the S. D. Warren Co. where he was chief industrial engineer for the past 10 years. Mr. Pearson, who was educated in England, went to Maine from New York City. He was assistant comptroller of Bath Iron Works Corp. during World War II and also later served as mill manager at Foster Manufacturing's Strong mill.

According to Stuart W. Tisdale, Southworth's president, the company has made important progress in developing a new line of finishing handling equipment for the paper industry. Southworth is in the process of expansion and new product research, as well as adding to its technical service for the paper industry. The company, established in 1890, is well known for its precision machinery and materials handling equipment.

Allied Chemical Corp.'s Solvay Process Division has announced three executive appointments. John B. Green becomes assistant to the

president, Robert H. Reed is named director of development and C. Russell Hall is appointed division comptroller.

Dr. Reed is a graduate of Grove City College, Grove City, Pa., with a degree in chemical engineering. He also holds a Ph.D. degree in chemical engineering from the State University of Iowa. Joining Solvay's research department in 1949 he became director of research in 1958, and since May of last year has been assistant director of development. Dr. Reed succeeds Arnold Hanchett, who is retiring after 39 years with the company.

Black-Clawson Co. announces the formation of an Air Systems Department located at Fulton, N. Y. The department specializes in engineering and marketing air drying equipment and systems for the pulp, paper and converting industries. Emphasis is placed on the application of the company's 3-D high velocity air dryer for both paper machine and coating drying.

Monsanto Chemical Co. has announced that Andrews Paper and Chemical Co., Inc., Great Neck, Long Island, N. Y., has been appointed sole distributor for Monsanto's Mertone WB-4 and Mertone 200.

The Mertone products are colloidal dispersions of silica in water and are used as a precoat on blueprint and other reproduction papers to obtain clearer, more legible prints.

Allis-Chalmers Manufacturing Co., Milwaukee, has appointed William E. Korsan assistant manager and Paul W. Clark manager of sales of the industrial systems department.

Mr. Korsan has been with Allis-Chalmers since 1942, starting as a sales representative in the Memphis and St. Louis districts. He was named manager of the St. Louis district in 1955. and was transferred to the West Allis Works in 1957 as manager of sales of the electrical application department, now the industrial systems department. He is a graduate electrical engineer of the University of Wisconsin.

Mr. Clark came to Allis-Chalmers in 1949 and was an application engineer in the control department for five years, before transferring to the electrical application department. He was appointed supervisory engineer in the pulp, paper and general process section in 1957. He is an electrical engineering graduate of Iowa State College.

Signode Steel Strapping Co., Chicago, Ill., has appointed Richard G. Patterson to the newly created position of forest products industry manager.

Mr. Patterson has worked 16 years in the steel strapping business and for several years has done extensive work in the forest products industry, particularly in lumber. Mr. Patterson's appointment reflects the importance that Signode attaches to this industry.

In his new capacity, Mr. Patterson will coordinate sales and service to the forest products industry.

R. G. Patterson

G. E. Clink

C. S. Adams

F. H. Rourke

The Sandy Hill Iron and Brass Works in Hudson Falls, N. Y., has announced the following promotions.

George E. Clink, a member of the company's engineering staff since 1943 and its chief engineer from 1954 until his advancement to chief development engineer and assistant to the vice president in charge of engineering in May 1957, has been advanced to assistant vice president. Currently, Mr. Clink is also serving as a member of TAPPI's sub-committee on paper machine drive requirements.

Charles S. Adams, who joined the Sandy Hill sales staff, with a background of 25 years experience in the paper mill machinery field, in May 1957, and who was advanced to assistant sales manager in May 1959, has been named an assistant vice president.

Floyd H. Rourke, on the staff of the accounting department since July 1947, and manager of the department and assistant comptroller since June 1957, has been named assistant to the president.

Eimco Corp. has named George Slajchert West Coast manager of industrial sales for the Filter and Process Engineers Divisions.

Mr. Slajchert will headquarter at the division's offices in San Mateo, Calif., and will be responsible for sales activities for Eimco filtration, agitation, sedimentation and industrial waste and water treatment equipment on the West Coast including British Columbia.

Research-Cottrell, Inc., Bound Brook, N. J., announces the appointment of A. B. Walker as assistant director of research and development. In this capacity Mr. Walker will be in charge of research and development activities. H. J. White, previously director of research and development, has accepted an appointment as Professor of Applied Science at Portland State College, Oregon.

Mr. Walker joined Research-Cottrell in 1947 as a member of its engineering staff. He holds a B.S. in mechanical engineering from Rutgers University. After serving as a field test engineer and development engineer, he left the company temporarily in 1951 to return in 1955 as chief of the New Products Section for Research-Cottrell.

Dr. White remains a member of the board of directors of the company, and will continue to serve in his capacity as a consultant. He came to Research-Cottrell in 1935 as a research scientist after teaching physics at the University of California.

Joseph T. Ryerson & Son, Inc., San Francisco bay area plant, announces the following appointments.

Charles E. Nunes was named construction product sales representative. He has been a member of the reinforcing division since joining Ryerson in 1954.

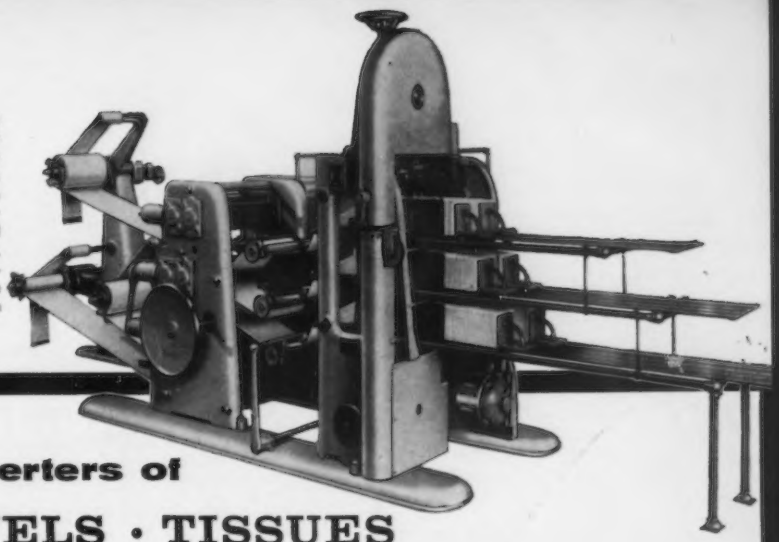
Jack H. Gillan, who has been with the company since 1947, was appointed manager, reinforcing products sales for this plant.

Borden Chemical Co. has purchased land in Fremont, Calif., to be used as the construction site for its recently announced 90 million pound per year resins and formaldehyde plant. Land purchase arrangements include a total of 26.8 acres.

The property, which is situated 35 miles from San Francisco. will be Borden Chemical's fifth on the West Coast. The resins plant is tentatively scheduled for completion in April 1960 and the formaldehyde plant in the fall of the same year.

A NAPKIN FOLDER WITH TRIPLE EMBOSSER

Pacemaker for the industry, this machine produces regular or facial quality napkins (and other paper or cellulose products) of all standard sizes in perfectly folded squares. Rotary in operation, it handles one to four parent rolls simultaneously and produces up to 2400 completed printed and embossed napkins per minute! Multi-color oil or flexographic ink printing and embossing units can be furnished or added as required. Heavy duty construction, high production speed, dependability, low original cost plus low maintenance expense makes this machine the most popular napkin producer in the industry.



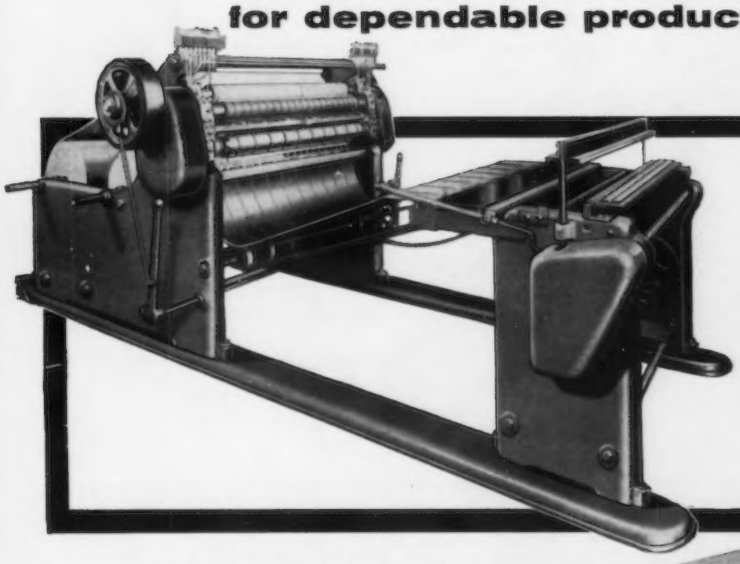
Leading converters of

NAPKINS • TOWELS • TISSUES

rely on these

HUDSON-SHARP "workhorses"

for dependable production capacity

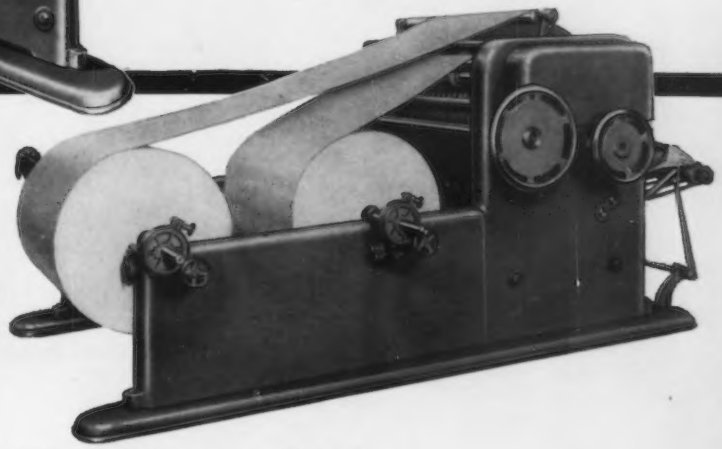


ROTARY TISSUE INTERFOLDER

Production of single or double-ply interfolded toilet tissues in single or multiple folds reaches unprecedented new highs with this modern Hudson Sharp machine. Sturdily constructed and completely rotary in operation it carries paper from parent rolls through feed rolls, into folding cylinders, and continuously delivers a product of exact sheet count to the packaging unit. Equipped with a semi-automatic banding unit, one operator easily handles the machine's entire output. Embossing units can be added if desired.

ROTARY TOWEL AND WAX INTERFOLDER

Designed to produce interfolded towels in any standard size, this machine produces from 10 to 12 cases, per towel width, per hour! Completely rotary in operation, all necessary adjustments are simple to make and easily accessible. Furnished in any widths up to 60" in all standard sizes and folds. Besides towels, this machine is practically adaptable for interfolding wax papers, glassines, butcher wraps, delicatessen papers and others. Write for complete information on any of these popular Hudson Sharp machines that are continuously increasing converting production throughout the industry.



Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

FMC Packaging Machinery Division

Hudson-Sharp Machine Company

1201 MAIN STREET, GREEN BAY, WISCONSIN

Corrosion can't hide in this fluid end!

You can easily detect corrosive action *before* breakdown with this Goulds Fig. 3715 centrifugal chemical pump.

Turn a few bolts and off comes the casing cover. Then you can inspect the impeller and clean out the insides *without disturbing pipe connections.* A millwright can do the entire job alone.

Mechanical seal or stuffing box is subjected to suction pressure only, reducing the sealing problem to a minimum.

The 3715 handles a wide range of corrosive liquids. It is available from stock in Type CF-8M (316) stainless, Gould-alloy 20, all-iron, aluminum bronze, bronze-fitted or iron with stainless trim. Ten sizes. Temperatures to 350 F. Capacities to 720 GPM, heads to 280 feet.

Write for Bulletin 725.4: Goulds Pumps, Inc., Dept. PT-99, Seneca Falls, N. Y.

As it has from its inception, the Huber, Ga., laboratory maintains a close relationship with customers through our Technical Service department. As our Georgia operations—and service to our customers—have grown, our laboratory has been enlarged to provide ever better service.

The largest of the Huber Paper Laboratory expansions was recently completed. The laboratory is equipped and manned to conduct the same kind of work that our customers perform in their own laboratories. We duplicate all of the essential stages of paper making from sheet to finished filled or coated paper.

If you would like to learn how the Huber Paper Laboratories can improve *your* product, we will be glad to sit down and discuss it with you.

J. M. HUBER CORPORATION
630 THIRD AVENUE • NEW YORK 17, N. Y.
Mines and Plants: Huber, Ga.; Graniteville & Langley, S. C.

ASSOCIATION NEWS

Highlights of National Council for Stream Improvement Annual Meeting

Both technical and administrative aspects of water and aerial pollution and their control will be reviewed during the National Council for Stream Improvement (of the pulp, paper and paperboard industries), Inc. meetings, which will be held at the Waldorf-Astoria, New York, during the period February 22 to 25, inclusive. Eight separate sessions have been scheduled.

Business sessions include the Annual Meeting of the Board of Governors, to be held at 2:30 P.M., on Monday, February 22, and the Annual Meeting of Members, to be held at 9:30 A.M., on Wednesday, February 24. The latter meeting will be followed by a symposium covering technical, legal, and tax problems associated with the disposal of liquid and gaseous effluents from pulp and paper mills. George E. Dyke, chairman of the Board of Governors of the National Council for Stream Improvement, will preside over the two business meetings.

The symposium includes a paper by William F. Saunders, of Dunnington, Bartholow & Miller, on "Federal Income Tax Treatment of Capital Expenditures for Waste Treatment Plants." There has been considerable confusion with respect to this subject which Mr. Saunders, a tax expert of long experience, will clarify.

Papers on water pollution control research will be presented by Herbert F. Berger and Russell O. Blosser, both of the Council's staff, and by Robert L. Laws of West Virginia Pulp & Paper Co. These will include the subjects of color reduction of bleachery wastes, incineration of sludges produced from the clarification of papermill effluents, and recent developments in the biological oxidation of the liquid wastes from integrated mills.

The two papers on air pollution will deal with legal aspects of the problem and stack and aerial sampling of kraft mill stack effluents. The former will be presented by Frank L. Seamans of Eckert, Seamans & Cherin, attorneys at law, and the latter by E. R. Hendrickson, Department of Civil Engineering, University of Florida. Mr. Seamans is an expert in this field. Dr. Hendrickson directs the National Council's research project at the University of Florida and is a member of the Florida Air Pollution Commission.

Waterproof Paper Mfrs. Elect Officers

The Waterproof Paper Manufacturers Association, Inc., held its Annual Meeting at the Edgewater Beach Hotel, Chicago, Ill. on January 14 and 15.

R. B. Vogt of Thilmany Pulp & Paper Co. was reelected president and Robert W. Hannah of Albemarle Paper Manufacturing Co. was reelected vice president. Three new directors were also elected: Floyd F. Newkirk, American Sisalkraft Corp.; Robert H. Wood, Simplex Paper Corp., and Stanley G. Yount, Southland Paper Converting Co., Division of Fortifiber Corp. In addition, the present board of directors includes N. T. Beardsley, Ludlow Papers Inc.; Robert W. Hannah, Albemarle Paper Manufacturing Co.; L. W. Gould, Crown Zellerbach Corp.; Fred Shepherd, The Ruberoid Co.; R. B. Vogt, Thilmany Pulp & Paper Co. and David M. Weil, The Cromwell Paper Co.

Dernell Every and T. K. Heston were reelected secretary-treasurer and assistant secretary-treasurer, respectively. Clarence K. Marion was reappointed counsel of the association.

The principal speaker at the meeting was Jerome J. Kipnees, vice president, Container Laboratories, Inc., a specialist and authority on packaging problems.

At the annual banquet held on January 14, Charles E. Judge, who had retired from his company, American Sisalkraft Corp., on January 1 after 37 years, was presented with a 20-inch model of Submarine S-9 upon which he had served during World War I. He was also presented humorously with a gold copy of the association's bylaws, which he, as chairman of the Bylaws Committee, had worked long and hard at revising, following the association's reorganization four years ago.

Specialty Paper and Board Affiliates Meet

The 26th Annual Meeting of Specialty Paper and Board Affiliates, Inc., was held at the Park Lane Hotel, New York, January 20 and 21. Officers re-elected were: President, David C. Knowlton, Knowlton Brothers; Vice President, Samuel R. Sutphin, The Beveridge Paper Co.; and Secretary-Treasurer, George V. Johnson.

At the general meeting held on Thursday, January 21, action was taken on several business matters and the president and secretary-treasurer gave their annual reports recapping developments in the industry in 1959 and the outlook for 1960 with specific reference to the role of the association. The growth of the association to 60 company members, the highest number ever, was cited as indicative of industry interest in many of Specialty Paper and Board Affiliates' product groups.

Following the association's annual luncheon, participated in by 69 members and guests, Robert E. O'Connor, executive secretary of APPA, spoke on the subject of chemical additives, which matter is of prime concern to the industry. Leo Teplow, industrial relations consultant, American Iron and Steel Institute, discussed some of the aspects of the recently settled steel strike. Also Professor Henry F. Graff of Columbia University gave an interesting and stimulating talk on "The American President—1960 Style."

N.P.T.A. Issues Membership Roster

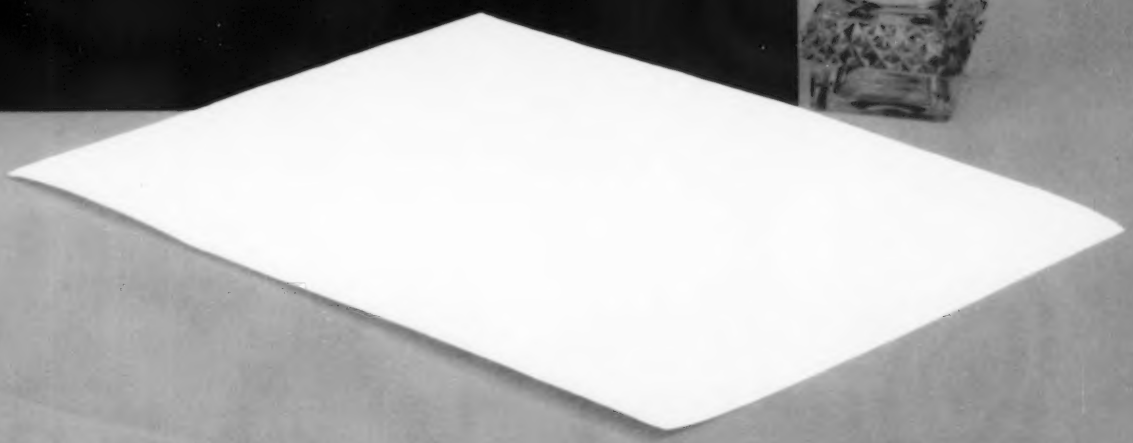
The first membership roster in two decades has just been issued by The National Paper Trade Ass'n., Inc. This Roster has been mailed to all members of the association, mill executives and paper trade associations.

The Roster, a four-by-six-inch pocket-size publication, contains names, addresses, and telephone numbers of 1100 member-merchant houses, including their branches with warehouses and sales offices. Each member house is classified as to whether it is fine, wrapping or a dual operation. Also included are the names of the 219 N.P.T.A. members active in official capacities with the association.

Copies of the Roster, which is intended to be issued on an annual basis, may be obtained from The National Paper Trade Ass'n., Inc., 220 East 42nd St., New York 17, N. Y., for $2.50 each.

Noteworthy

Letter papers which reflect good taste are made with Glidden Zopaque Titanium Dioxide



Stationery often must serve as a man's personal emissary. For this task, it requires the quality appearance supplied by Glidden Zopaque.

Zopaque lends highest opacity, whiteness and brightness to paper products. Readily dispersible, it is ideal for all formulations.

Write now for full information on grades of Glidden Zopaque Titanium Dioxide specially developed for beater addition and coatings.

QUALITY Glidden PRODUCTS

FINEST PIGMENTS FOR INDUSTRY

The Glidden Company
Chemicals—Pigments—Metals Division
Baltimore 26, Maryland

(This advertisement is printed on paper stock containing Glidden ZOPAQUE Titanium Dioxide.)

To protect a world wide reputation for producing the ultimate in custom-engineered precision doctors, Lodding spares no effort. Critical tests and inspections accompany every step of fabrication. Finally, each doctor is test-mounted in the exact position it is to occupy on the roll. It is then checked for tolerances and clearances before installation.

Telescopic inspection, assuring edge linearity to ±0.002 of an inch, is but one of many tests for quality performed on each Lodding doctor before it is permitted to leave the plant.

Exacting quality control and research combined with unique specialization in doctor engineering are among the reasons why Lodding doctors out-perform others in thousands of installations here and abroad.

Whatever your doctor requirements, from Fourdrinier to reel, you'll get exceptional value and performance from Lodding, recognized for leadership in precision doctoring.

Call on Lodding or your nearest sales representative for complete technical information at any time.

Telescopic inspection of blade holder

Testing complete doctoring equipment in operating position.

LODDING
Engineering Corporation
AUBURN, MASSACHUSETTS

FULL STEAM AHEAD

See the Cyanamid **MELOSTRENGTH*** Paper Exhibit at the TAPPI Convention

See you in the lobby of the Hotel Commodore, New York, February 22 through 25. We think you'll find the Cyanamid Exhibit interesting, fun—and believe it will help make your visit to New York more enjoyable. Features MELOSTRENGTH Resin—shows how it adds to the value of paper. Cyanamid, largest supplier of chemicals to the paper industry, invites you to see for yourself.

AMERICAN CYANAMID COMPANY, PAPER CHEMICALS DEPARTMENT
30 ROCKEFELLER PLAZA, NEW YORK 20, NEW YORK

CYANAMID

*Trademark

CHAS. T. MAIN, INC.

ENGINEERS

PROCESS STUDIES, DESIGN, SPECIFICATIONS, CONSTRUCTION SUPERVISION

PULP AND PAPER MILLS

STEAM, HYDRAULIC AND ELECTRICAL ENGINEERING REPORTS, CONSULTATION, VALUATIONS

●

BOSTON, MASSACHUSETTS

CHARLOTTE, NORTH CAROLINA

Meet Huyck's

PLATT

Jim Platt, Huyck's Chief Felt Designer, is largely responsible for the continuing improvement in performance characteristics of all types of Huyck felts. By working closely with Huyck Field Service Engineers, he and his group of experienced designers, use the many Huyck developments in felt construction and chemical treatments to provide better felts for all papermakers.

HUYCK FELTS

First in Quality . . . First in Service Since 1870

ADVERTISEMENT

PAPER TRADE JOURNAL is always mailed on Friday at East Stroudsburg, Pa. If you feel that there is undue delay in receiving your copies, we suggest that you write to your local postmaster with a copy to S. E. Marsh, assistant postmaster at East Stroudsburg. If you will also send a copy of your complaint to us this will keep us posted on areas of poor service.

Prices of Fibers

MARKET WOOD PULP

FIRST QUARTER CONTRACT PRICES PER SHORT AIR-DRY TON

Delivered Basis

	U.S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$ 82.50/ 90.00	$ 82.50/ 90.00	§90.00/ —	§80.00/ —	§90.00/ —
Bleached Gw'd	$ 97.50/100.00	$ 97.50/100.00			
Kraft, Blchd.	157.00/ —	160.00/162.50	§157.00/162.50*		§157.50/ —
Kraft, Blchd. Hdwd.	152.00/ —		§137.00/ —		
Kraft, Semi-bleached.	140.00/ —	140.00/ —			
Kraft, Unbl.	117.50/125.00	125.00/130.00	†125.00/130.00	125.00/ —	
Sulphite, Blchd.	‡150.00/155.00	‡150.00/155.00	*155.00/ —	*155.00/ —	155.00/ —
Sulphite, Bl. Hdwd. .	150.00/ —				
Sulphite, Unblchd ...	135.00/ —	135.00/ —	†135.00/ —	*135.00/ —	
Sulphite, Unb'l. Gl'sn		140.00/ —	†134.00/ —		
Soda, Blchd.	§47.00/150.00	160.00/ —			

§ On Dock Atlantic Ports. * Freight allowed. † Varying Freight Allowances.
‡ Depending on Brightness.

COTTON LINTERS

F.O.B. OIL MILLS
WEEK ENDED JANUARY 26

	Atlanta	Memphis	Dallas	Los Angeles
Grade 1	n.a.	n.a.	n.a.	n.a.
2	n.a.	n.a.	n.a.	n.a.
3	$7.50/7.00	$8.50/7.50	$7.50/7.00	n.a.
4	7.00/6.25	7.25/6.25	6.50/6.25	n.a.
5	6.25/5.75	6.00/5.50	6.00/5.50	8.50/7.00
6	5.75/4.75	5.25/5.00	5.25/5.00	6.50/4.50
7	4.75/4.25	4.50/4.00	4.75/4.00	4.25/4.00

WASTE PAPER MARKET

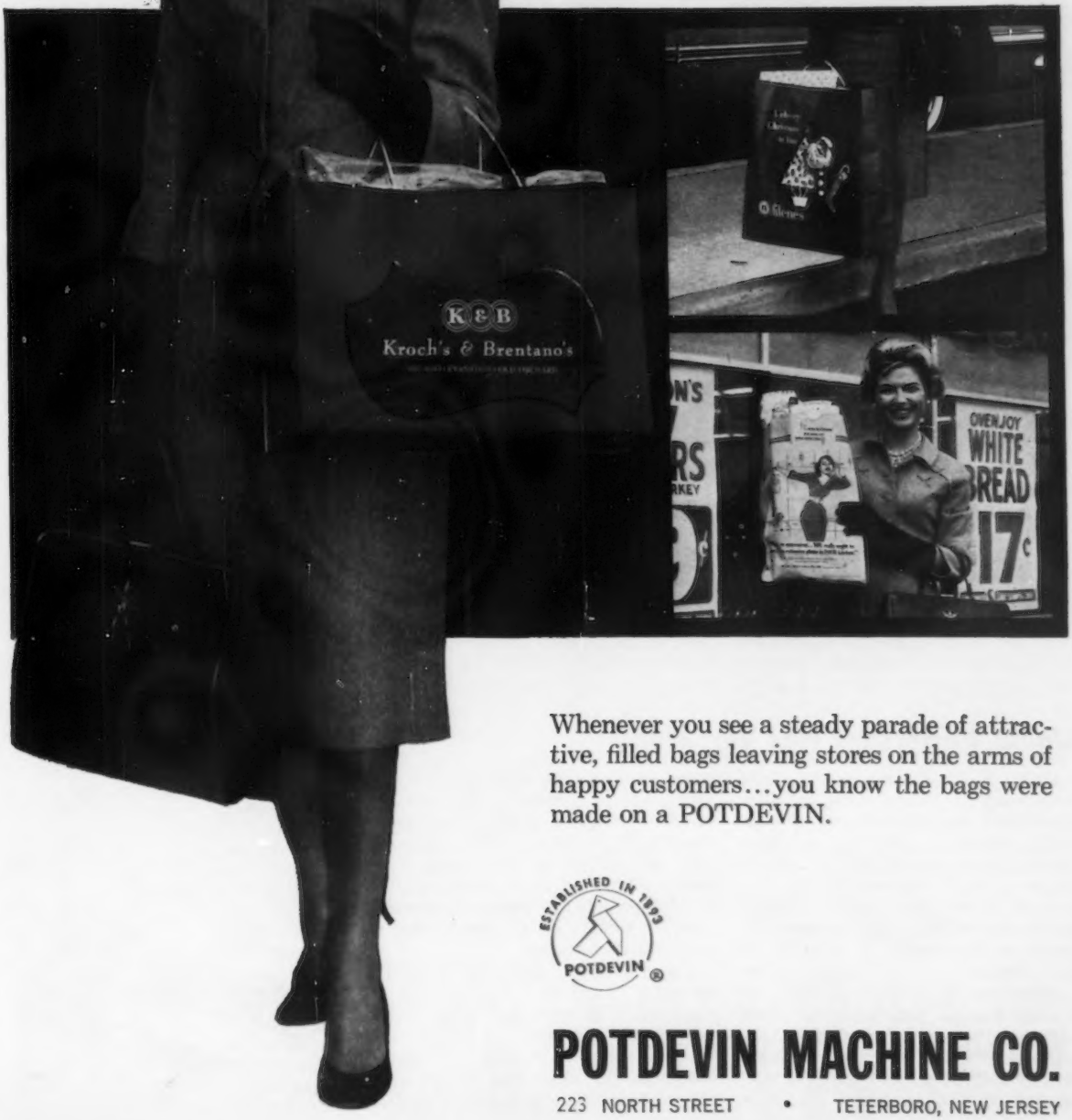
Mill Prices, f.o.b. Trucks Shipping Point — Includes Brokerage

These quotations are a partial indication of the price range on volume tonnage in each market on the date specified, as gathered from major dealers and brokers. SPECIAL PACKINGS AND SPOT TONNAGE NOT INCLUDED. Prices nominal.

	New York	Boston	Chicago	Los Angeles
	Feb. 1	Feb. 1	Feb.	Feb.
No. 1 Mixed Paper	$ 7.00/ 9.00	9.00/ 11.00	8.00/ —	12.00/ 13.00
No. 1 News	14.00/ 15.00	14.00/ 15.00	16.00/ —	14.00/ —
Overissue News (Lg. size)	13.00/ 15.00	13.00/ 15.00	21.00/ —	19.00/ 20.00
Mill Wrappers	19.00/ 22.00	13.00/ 15.00	13.00/ —	14.00/ 15.00
Old Corrugated Containers	22.00/ 23.00	21.50/ 22.00	20.00/ —	23.00/ —
Super Resorted Kraft Paper	35.00/ 40.00	— / —	30.00/ —	55.00/ —
New Double Kr. Ld. Corr. Cuts	32.50/ 35.00	35.00/ —	32.50/ —	35.00/ —
(Semi-chem. medium)	45.00/ —	45.00/ —	42.50/ —	36.00/ —
New 100% Kraft Corr. Cuts	40.00/ 42.50	— / —	57.50/ —	— / —
New Br. Kraft, Env. Cuts	70.00/ 75.00	70.00/ 75.00	52.50/ —	55.00/ —
New Br. Kr. Bag Waste Prntd.	55.00/ 60.00	55.00/ 60.00	52.50/ —	55.00/ —
New Br. Kr. Bag Waste Unprintd ..	60.00/ 65.00	65.00/ 75.00	60.00/ —	60.00/ —
No. 1 Groundwood Shvs.	25.00/ 30.00	25.00/ 30.00	22.00/ —	32.50/ 35.00
White Newsblanks	55.00/ 60.00	53.50/ 60.00	40.00/ —	60.00/ —
No. 1 Soft White Shvs.	60.00/ 65.00	60.00/ 65.00	60.00/ —	70.00/ 75.00
Super Soft White Shvs.	65.00/ 75.00	75.00/ 85.00	70.00/ —	— / —
Hd. White Shvs.	85.00/ 90.00	90.00/100.00	85.00/ —	95.00/ —
Hd. White Env. Cuts	100.00/105.00	105.00/110.00	90.00/ —	113.00/ —
Col. Tab. Cards	47.50/ 50.00	47.50/ 50.00	52.50/ —	40.00/ 45.00
Manila Tab. Cards	67.50/ 70.00	67.50/ 70.00	75.00/ —	70.00/ 75.00
No. 1 Col. Ledger	37.50/ 42.50	37.50/ 42.50	45.00/ —	29.50/ 32.50
White Ledger	55.00/ 60.00	58.00/ 60.00	55.00/ —	55.00/ —
Mixed Book & Mag.†	22.00/ 25.00	— / —	15.00/ —	— / —
No. 1 Books‡	22.00/ 24.50	17.00/ 19.00	32.50/ —	16.50/ 18.50

† Includes Time & Life; no coarse groundwood. ‡ Not to exceed 10% of groundwood.

Fashionable Carriers that SELL!



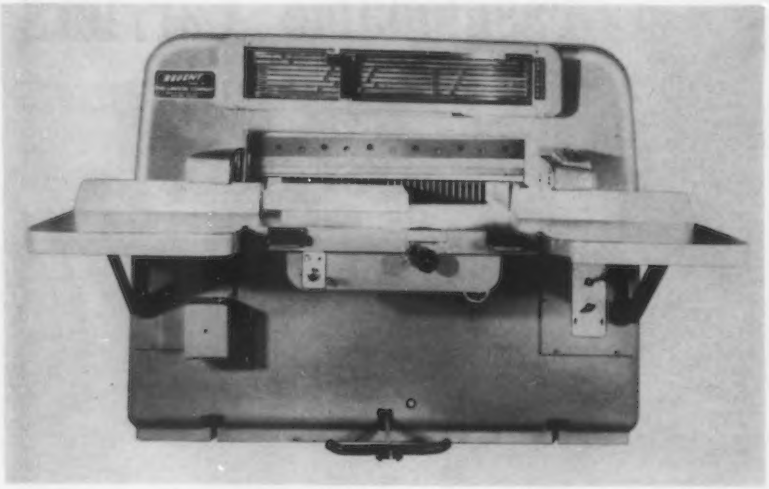
Whenever you see a steady parade of attractive, filled bags leaving stores on the arms of happy customers...you know the bags were made on a POTDEVIN.

ESTABLISHED IN 1893
POTDEVIN ®

POTDEVIN MACHINE CO.

223 NORTH STREET • TETERBORO, NEW JERSEY

NEW EQUIPMENT & SUPPLIES



Hydraulic Clamping Feature of Paper Cutters

Three Regent Automatic Clamp Paper Cutters (34½-inch, 42-inch and 52-inch) are currently being introduced by The Lawson Co., division of Miehle-Goss-Dexter, Inc. All three models offer 42 stroke-a-minute knife speed, with right-to-left action. Clamp openings range from 4½-inches on the 34½-inch cutter through 6-inches on the 52-incher.

The clamps are fully hydraulic with an engineered clamp lead to assure that excess air is fully removed from the lift before the knife starts to cut. Clamp pressure can be from the front of the machine. Thus the paper is held throughout the cutting cycle to prevent offsetting or excessive marring of the top sheets. The clamp can be actuated by a foot treadle to facilitate gauging the cuts or to take the swell from loose or bulky signature.

Other features of the line of cutters include: two-hand operation; three-piece fingered back gauge; photo-electric safety beam; all controls on front of cutter; leak-proof hydraulic tank cast in base; micrometer handwheel adjustment; and magnified back gauge scale. Spacer operation, with an accuracy said to be within .004-inches, is optional. Additional details are available by writing directly to The Lawson Co., 2011 Hastings Street, Chicago 8, Ill.

Liquid Dispersant Has Versatility

Cavco X-17, a clear amber liquid dispersant, is not affected by alum, lime, acids, or alkalies and will actually redissolve any lime or magnesium soaps formed in the mix. It is also claimed to be an effective dispersant of tar, pitch, asphalt, waxes, resins, and mineral oils. Because the liquid is non-volatile, it is usable at low, medium or high temperatures.

Added to the beater, Bellmer, or mixing sluices, but prior to alum addition, the amount of Cavco X-17 will depend on the temperature, hardness of the water, and the type and amount of the contaminant. It is recommended that each mill run its own tests to determine the amount of X-17 feasible under their own conditions. Actual amounts will probably run in the neighborhood of 2 quarts (4 pound to 4 quarts) added to 1600 pounds dry stock, or possibly up to 8 quarts on the more highly contaminated stocks.

The dispersant dissolves instantly in water (hard or soft) to make a clear solution with the faint odor of pine oil. However, as Cavco emphasizes, this odor will not carry over into the pulp. The pH of a 1 per cent solution is 7.0 to 7.5. Its cold test is 25°F. Surface tension in a 1:50 dilution with water at 30° C. is 31.5 dynes per cm. Cavco adds that the dispersant will not cloud nor separate in boiling water. Jos. Cavedon Chemical Co., Woonsocket, R. I. will furnish further information upon request.

Valves Available With Viton-Faced Plugs

DeZurik Eccentric Valves through 6-inches size are now available with Viton covered plugs. The resilient Viton facing in combination with eccentric action provides a dead tight shut off on highly corrosive liquids, gases, and slurries. Viton is a trade name of the E. I. DuPont company.

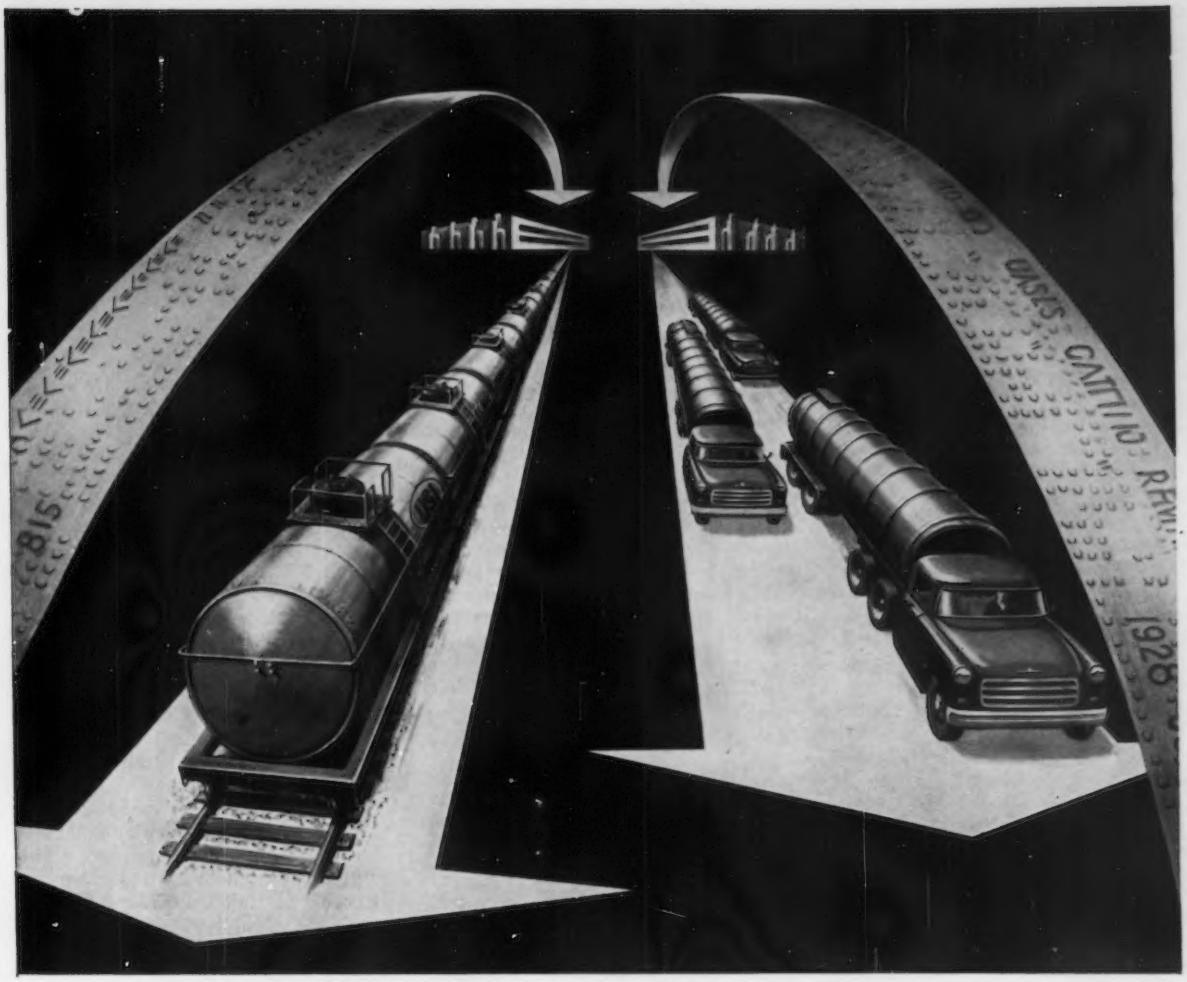
The physical properties of Viton are said to make it an ideal plug facing material. It does not cold flow; it is highly resilient insuring tight shut off, and it is not damaged by slurry particles. The temperature limits for Viton is higher than most rubber compounds and on some services it can be used to 350°F. Complete service recommendations will be made on request to DeZurik Corp., Sartell, Minn.

Fork Truck For Paper Rolls

The illustrated truck is specially designed to handle cylindrical goods, such as paper rolls, with diameters from 24 to 47 inches and lengths up to 59 inches. Maximum capacity is 2200 lbs. The unit is built by AB BYGG-och Transportekonom of Mjölby, Sweden.

Painted in safety orange, the frame and forks are one-piece stampings of high tensile steel, electrically welded. The hydraulic unit can lift the front end of the truck 4¾ inches. Vulkollan packings are used in this system and the unit is guaranteed leakproof.

All wheels are fitted with fully-enclosed SKF ball bearings. Overall



AUTOMATION SPEEDS U.S.I. CHLORINE AND CAUSTIC SODA

. . . from Huntsville, Alabama

To U.S.I., customers' orders are high priority communications. That's why our offices and plants all over the country are linked in a 7,000-mile private wire network of teletypes and data processing equipment.

As one of U.S.I.'s customers for chlorine or caustic soda, here is the way this automated order handling system would insure quick delivery of *your* shipment. When your order is placed with the U.S.I. sales office in your area, it is transmitted by coded tape direct to Huntsville, Ala. Here automatic machines use the tape to produce shipping papers, invoice and such records as are needed for internal use. The system cuts as much as four days from the time that might be required to process your order by ordinary methods.

Ample capacity at U.S.I.'s two Huntsville plants is further assurance of expedited service.

Liquid chlorine is shipped from Huntsville in tank cars, commercial grade 50% liquid caustic soda in tank cars, tank trucks and barges. Other U.S.I. plants supply ammonia, polyethylene and sodium peroxide. Make U.S.I. *your* supplier of these paper chemicals. Our products and ability to serve you are discussed in the booklet "National Distillers and Chemical Corporation Expands in the Chemical Industry". We'll be happy to send you a copy.

U.S. Industrial Chemicals Co.
99 Park Avenue, New York 16, N. Y.
We'd like to know more about U.S.I.

- ☐ Send booklet "National Distillers Expands in the Chemical Industry"
- ☐ Send information on your Automated Order Handling System
- ☐ Have a salesman call for an appointment to discuss chlorine or caustic soda
- ☐ Put me on your mailing list

Name_____ Title_____

Company_____

Address_____

City and State_____

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in principal cities

width of the truck is 40 inches; width and length of the forks are 12 inches by 55 inches. Further information is abailable from Products-from-Sweden, Inc., 124 East 40th Street, New York 16, N. Y.

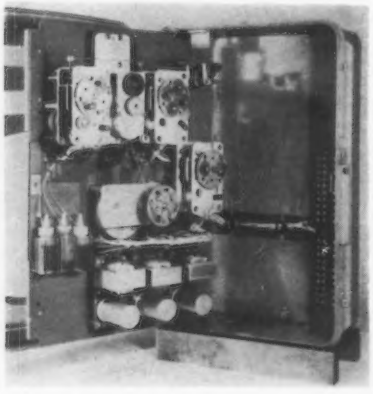
Fiber-Glassed Pallets Reduce Package Damage

A noteworthy development which has taken place in recent months is the application of epoxy-glass linings to wooden pallets, reports Furane Plastics, Inc., 4516 Brazil St., Los Angeles 39, Calif. This development, it is said, greatly extends the serviceability of wooden pallets, permitting a larger number of products to be handled. Splintered wood projections and rough edges which ordinarily tear packaging films are virtually eliminated through a protective overlay of glass cloth and epoxy resins.

In practice, a special fluid and impregnating grade of epoxy is combined with an appropriate safety hardener and the combination brushed on glass tape surfacing the wooden pallet strips. In the event this technique is used to repair existing wooden pallets, it is desirable to economize in the use of materials, and apply only to those areas showing ruptures or breaks. Materials will set rapidly at room temperatures, permitting the repaired pallets to be put into use with a minimum of lost time. Heat lamps or hot air can be used to effect repairs to pallets in a matter of minutes.

Telemetering Instruments For In-Plant Control

Several more sensitive Chronoflo recorder-receiver arrangements are announced by Builders-Providence Div. of B-I-F Industries. Design features include a re-engineered power positioner with reportedly faster and quieter response; 2-, 4-, 8-, 15- and 60-second time-cycles; up to 16 control switches for alarm and control functions; swing-out panel; modular construction; and multiple pen arrangements.

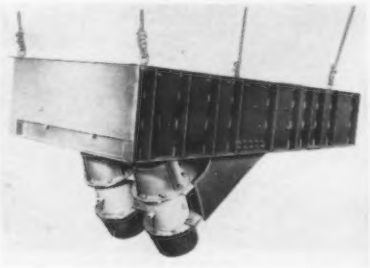


For telemetering flow, pressure, temperature, level, position, r.p.m., electrical quantities, the Chronoflo is compatible with Supervisory Control Systems that employ tone, microwave or radio-transmission links. For additional information, write to B-I-F Industries, Inc., 345 Harris Avenue, Providence 1, R. I.

Extends Line of Vibrating Bulk Feeders

Link-Belt Co. has announced the addition of 49 sizes, in two motor capacities, to its line of motorized counterweight vibrating feeders.

Thirty-one sizes with capacities from 275 to 1700 t.p.h. have been added to the MC twin motor models. The company also added 18 single motor feeders with capacities from five to 525 t.p.h. to its existing line. Size ranges now include feeder lengths from four to 14 feet; trough

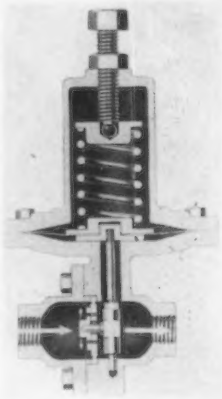


widths from one to six feet and capacities from five to 1700 t.p.h.

The MC motorized counterweight feeders consist of a trough and either a single or double motorized vibrator drive, mounted directly to the rugged channel frame. The vibrator is driven by motors especially designed for vibratory service, with a double-extended shaft on which counterweights are mounted. An unbalanced arrangement of weights imparts a straightline oscillating or vibrating motion to the trough, lifting the material upward and forward along the trough length. Either type may be floor-mounted or cable-suspended. Write Link Belt Co., Prudential Plaza, Chicago 1, Ill. for Bulletin 2869.

Sliding Gate Seats for Regulators, Control Valves

Low flow Sliding Gate seats for regulators and control valves for ¼ inch through 3 inch sizes are available from OPW-Jordan Corp., 6310 Wiehe Rd., Cinn. 13, Ohio. Not just in 40 per cent reduced trim, but any capacity to suit individual requirements. For example: 1¼ inch body size can have capacities of 1¼ inch, 1 inch, ¾ inch, ½ inch, ⅜ inch or



¼ inch. Low flow seats are used where initial requirements are for a low flow but later needs are for high flows, strength of full line size valves is needed but low flow is required, and to replace seats in an oversized valve body. Standard Sliding Gate seats are made of stainless steel with industrial hard chrome finish. Seats are self-lapping and self-cleaning in operation and give tight shut-off. Complete information is available in Bulletin SRBc 2-60.

Carry-All Truck Also Personnel Carrier

A type of walkie-rider carry-all truck for use as a baggage truck, interplant delivery truck or order selector truck has been introduced by Lewis-Shepard Products, Inc. The L-S Totemaster can be furnished with 12- or 24-volt electric systems and with overdrive. Available in capacities ranging from 2000 pounds to 10,000 pounds, it has an overall length of 97-inches and a wheelbase of 70 inches. Platform length, width and height are 54 x 40 x 7 inches respectively.

Shelving is removable. The Totemaster may also be furnished with

No matter what your product, process or problem involving white pigmentation, look to TITANOX® pigments and our technical service for the answer. Titanium Pigment Corporation, 111 Broadway, New York 6, N. Y.; offices and warehouses in principal cities. In Canada: Canadian Titanium Pigments Ltd., Montreal.

7541

seats on the rear platform and used as a personnel carrier. For further information, write to Lewis-Shepard Products, Inc., Department R10-2, 125 Walnut St., Watertown, Mass.

Additions, Modifications To Coupling Line Announced

A junior line of "Sure-Flex" couplings is announced by T. B. Wood's Sons Co., Chambersburg, Pa. The three "J" sizes are: 3J, for stock bores from ⅜ through ¾ inches; 4J, for stock bores from ½ to 1 inch, and 5J, for stock bores from ⅝ to 1⅛ inches. Peak horsepower ratings, at 1,750 r.p.m. are: 3J, 1.5 h.p.; 4J, 3.0 h.p., and 5J, 6.0 h.p.

Flanges are cast from zinc alloy AG40A, which has a tensile strength of 41,000 p.s.i. Each coupling has only three components: its two cast flanges and a one-piece rubber sleeve. The molded teeth of the flexible sleeve lock into the teeth of the flanges without clamps or screws, tightening under torque. There is no metal-to-metal contact; hence no wear on the teeth of the flanges, it is said.

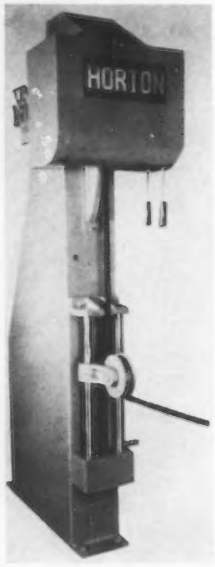
Wood's has also added to the regular "Sure-Flex" line a number 14 coupling, which is rated at 500 peak horsepower at 1,750 r.p.m. It will accommodate shafts ranging from 1 inch through 3-15/16 inches.

Larger "Sure-Flex" couplings, Nos. 11, 12 and 14, are now fitted with demountable "Sure-Grip" bushings. By shifting these interchangeable, QD-type tapered bushings, a coupling may be used on different-sized shafts throughout its size range.

Looking for a new position?

Looking for new personnel?

Keep your eye on our Classified Advertising Section



THE CORE PULLER pictured is designed to pull cores or shafts from jumbo rolls. It takes only 10 inch by 32 inch floor space, and it is completely adjustable and will handle rolls 34 inches to 84 inches in diameter, according to the Horton Manufacturing Co., Inc., 1179 15th Avenue S.E., Minneapolis 14, Minn. Available is a companion hydraulically-operated shaft dolly, which raises or lowers the core to the required height.

Figures of the Week

PAPER PRODUCTION RATIO REPORT—American Paper & Pulp Assn. Figures

(Production as per cent of normal capacity)

COMPARATIVE WEEKLY SUMMARIES

	Dec. 26, 1959	Jan. 2	Jan. 9	Jan. 16	Jan. 23
1960	62.5	80.2	95.6	97.4r	95.6
	Dec. 27, 1958	**Jan. 3**	**Jan. 10**	**Jan. 17**	**Jan. 24**
1959	56.2	77.3	91.0	90.8	90.5

r Revised

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1960	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	87.8	90.5	93.2	94.4	95.3	95.6	87.0	96.0	92.4	97.4	95.3	86.8	92.5

‡ Preliminary.

COMPARATIVE YEARLY SUMMARIES

	1953	1954	1955	1956	1957	1958	1959	1960
Year to Date	—	93.9	94.6	98.7	93.3	85.5	86.4	96.3
Year Average	92.3	91.6	96.2	97.9	90.4	87.0	92.5	—

All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available.

PAPERBOARD OPERATING RATIOS†—National Paperboard Assn. Figures

COMPARATIVE WEEKLY SUMMARIES

	Dec. 26, 1959	Dec. 27-31, 1959	Jan. 1-10	Jan. 16	Jan. 23
1960	78	44	80	97	95
	Dec. 21-31, 1958		**Jan. 1-10**	**Jan. 17**	**Jan. 24**
1959	55	—	78	93	91

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1960	—	—	—	—	—	—	—	—	—	—	—	—	—
1959	89	94	95	94	96	96	83	97	92	97	94	80	92

† *Per cents of operation based on "inch-hours" reported on a 6-day basis to the National Paperboard Association.*

SUMMARY OF PAPERBOARD STATISTICS—National Paperboard Assn. Figures

ITEM	THIS WEEK ENDING Jan. 23, 1960	LAST WEEK ENDING Jan. 16, 1960	CUMULATIVE TO DATE Jan. 1 to Jan. 23, 1960, incl.
% Activity	95%	97%	90%
Total	322,114	324,592	908,191
Liner	112,898	114,835	318,902
Corrugating Material	49,746	49,257	141,342
Chip & Filler Board	4,088	5,564	13,631
Total Containerboard	167,732	169,656	473,874
Folding	61,727	56,960	167,603
Set-Up	13,128	13,040	36,623
Special Food Board	25,885	29,716	80,470
Other	53,642	55,220	149,621
Total Boxboard	154,382	154,936	434,317
Total Orders			
Received	331,705	314,647	
Unfilled End of Week	459,259	447,667	

Open letter

to suppliers who serve the paper and pulp industry

Editorial pages can't do the whole job

Our readers have many information needs our editors can't fully serve.

You are reading this issue of PAPER TRADE JOURNAL because you want to know what's going on in the industry.

So are thousands of your customers and prospects.

Most mill readers—at least the ones I have a chance to talk to—say they read the JOURNAL for news, trends and practical ideas. Ask *why* they want this information and they'll say, in effect, "to do a better job." This can mean any improvement in any phase of a man's responsibilities—production or maintenance methods, record keeping, safety, materials handling—and certainly includes the purchase of materials, equipment and supplies needed to make an improvement effective.

Our editors report new and improved products as part of their coverage of news, but the point I'd like to make is that as editors they cannot possibly tell our readers all they'd like to know about the hundreds of products that are constantly under consideration for purchase. For example—*only you know the many specific advantages of your product that you'd like our readers to know about.*

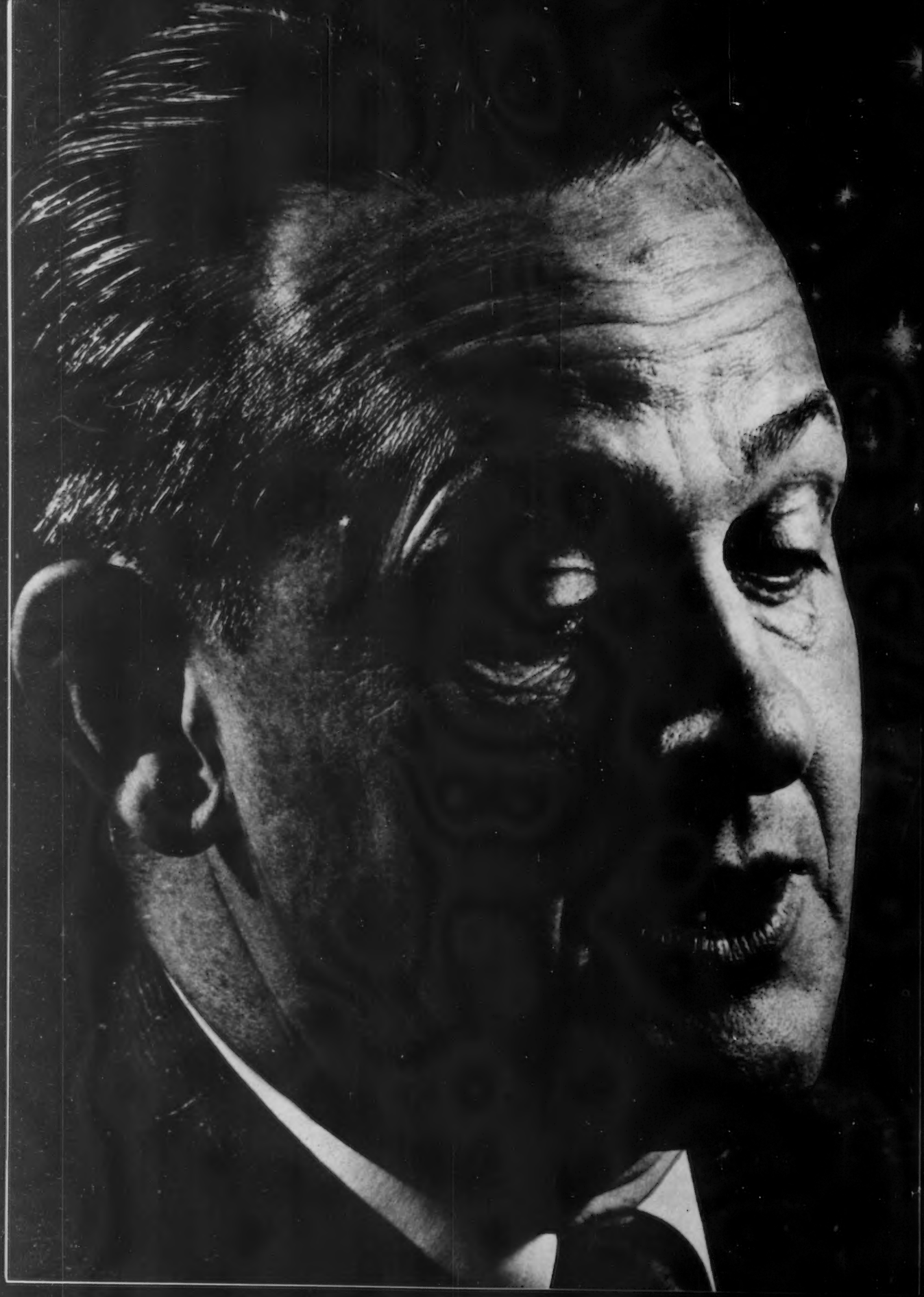
This leaves an information vacuum in PAPER TRADE JOURNAL that can be filled only by suppliers in the form of advertisements.

By this definition an effective advertisement (for both your prospects and you) is basically information *wanted* by readers to help them make buying decisions that in turn enable them to "do a better job."

This may be a roundabout way to define what advertising is in our industry, but I'm putting it this way for a purpose: it sets the stage for the kind of information paper and pulp men want in ads and, therefore, suggests the kind of advertising that will be most effective for suppliers to run. More about this later.

George E. Lockwood PUBLISHER

PAPER TRADE JOURNAL



Jim Weaver, who supervised construction of new type chlorine and caustic soda tank cars, says

you'll like doing business with Columbia-Southern

Jim Weaver and other members of Columbia-Southern's Traffic Department have pioneered a long list of improvements in the safe and economical shipping of chemicals. The company's new fleet of tank barges incorporates many special features designed for more efficient handling of bulk quantities. Columbia-Southern's liquid caustic tank cars were the first to use a special lining that permits delivery of high concentration caustic—free from metallic pickup. Also, Columbia-Southern developed the use of the dome safety platform on tank cars, as an effective safeguard against accidents during loading and unloading.

This *customer-oriented* attitude is common to all Columbia-Southern activities. For example, Columbia-Southern caustic soda is available in a variety of forms and grades, providing each customer with the particular caustic best suited for his facilities and needs. Customers can choose from solid, flake (in fine or medium particle size), or liquid (in 50% or 73% concentration). In addition, there's a highly purified grade of liquid caustic, for special uses such as rayon manufacture. And your Columbia-Southern Technical Service Representative is always available for professional consultation on the proper application of these various forms of caustic soda.

Buyers of chemicals in every industry like this thoroughness, because it adds up to extra profits for them. You'll find that it will for you, too.

Anhydrous Ammonia, Barium Chemicals, Benzene Hexachloride, Calcium Chloride, Calcium Hypochlorite (Pittchlor®, Pittabs®), Carbon Tetrachloride, Caustic Potash, Caustic Soda, Chlorine, Chlorinated Benzenes, Chloro IPC, Chrome Chemicals, Hydrogen Peroxide, Muriatic Acid, Pacific Crystals, Perchlorethylene, Rubber Pigments (Calcene®, Hi-Sil®, Silene®), Soda Ash, Sodium Bicarbonate, Sodium Sulfate, Titanium Tetrachloride, Trichlorethylene

columbia southern

CHEMICAL CORPORATION

A Subsidiary of Pittsburgh Plate Glass Company • One Gateway Center, Pittsburgh 22, Pa.

NEW OUTLETS FOR YOU...
THE COMMON EUROPEAN MARKET
GROUPING 165,000,000 CONSUMERS

Suppliers to the paper industries, advertise your products to the paper manufacturers of the Common Market by using the advertising pages of "LA PAPETERIE" the most important and the oldest French Language Technical Magazine (82nd year), widely read throughout Europe.

(Price per page: From $80 to $68, based on quantity)

Ask for a specimen copy and the rates— or instruct your advertising agent to obtain them from:

"LA PAPETERIE"
9 Rue Lagrange
Paris
5e
France

UNBLEACHED

BLEACHED

ELECTRICAL PULPS

OTHER SPECIALTIES

YOU CAN GET ALL OF THESE SOFTWOOD KRAFT PULPS FROM DRYDEN

We are sure you know about the high quality of Dryden Bleached Sulphate Pulp. But did you know that you can also make Dryden your single source of supply for many other kraft pulps?

Dryden Unbleached—widely recognized for its high tensile strength—for everything from twisting tissues to boxboards.

Dryden Electrical Pulps—tailor-made for cable wrap, transformer board and capacitor tissue.

Dryden's Other Specialties—formulated to meet many unusual requirements. (We produce pulps for anti-tarnish papers, for example.)

We would be glad to make up a single boxcar shipment of several of our pulps for you to try in your own operations.

DRYDEN PAPER COMPANY, LIMITED

DRYDEN, ONTARIO, CANADA

SOLD BY: **Anglo Paper Products, Ltd.**

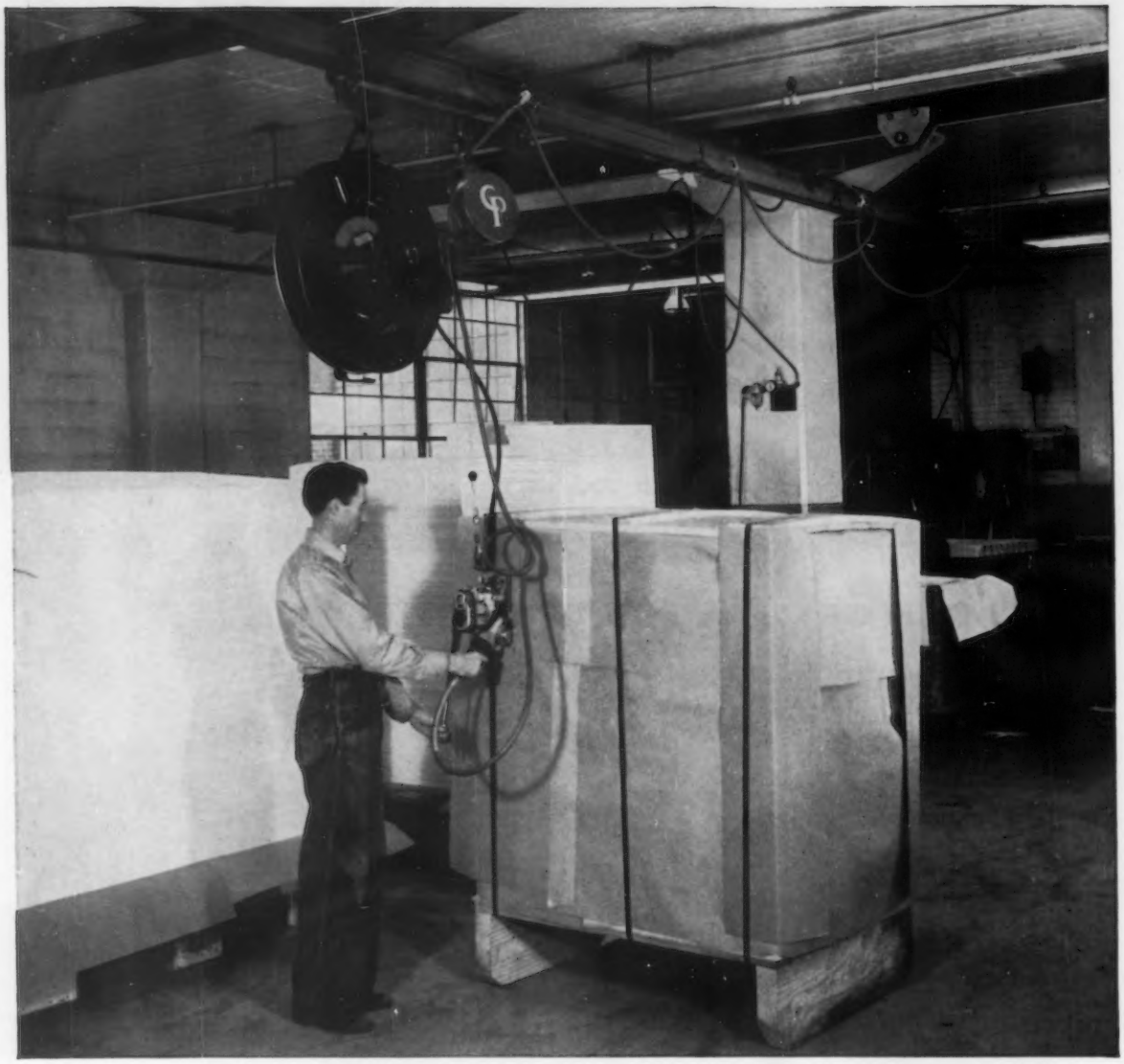
2055 Peel Street, Montreal 2, Quebec

SALES REPRESENTATIVES IN THE UNITED STATES:

Northeastern Paper Sales, Inc.

400 Madison Avenue, New York 17, N. Y.

20 North Wacker Drive, Chicago 6, Ill.



Fast Signode way to strap paper skids

Strapping paper skids is fast and easy with a setup like this. The bridge crane gives mobility to the strapping equipment and obstruction-free working space on the floor. Signode's AP-34 air-powered strapping machine applies strap almost effortlessly, in seconds. This Signode design setup makes skid strapping a much more efficient and easy operation. It saves important time and frees valuable floor space. A Signode engineering consultant will be glad to work with you to develop complete strapping stations in your plant, tailored to your needs. Let him help you save time and money now. Write:

SIGNODE

SIGNODE STEEL STRAPPING CO.

2677 N. Western Avenue, Chicago 47, Illinois

Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide

In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

First in steel strapping

NOW!

a better acid cleaner for felts...

Activol Beads

Reg. U.S. Pat. Off.

Paper mills, which formerly used Muriatic Acid for cleaning felts, report that changing to Activol Beads—the safer, more convenient, dry, bead form of acid—gives their felts extra weeks of life, keeps them remarkably softer and more open. Time and money are saved because the use of Activol 694 eliminates crushed sheet marks, reddening of paper and down time due to felt failure. Many mills now use Activol for continuous washing of felts, while paper is being made. Only a water rinse is needed to wash out the solution.

Outstanding benefits that Activol 694 Beads provide are:

- **Greater safety, greater convenience than bottled acid.**
- **Quicker, more thorough removal of lime, calcium, size, clay, resins, etc. from felts.**
- **More efficient, longer life span for felts.**
- **Less paper breakage, no reddening.**
- **Better sheet formation, no sticking of paper to felt.**
- **No pitting of cylinders. Increased life for cylinder wire; faster drainage, shorter drying time for paper.**
- **Detergent action is combined in an acid medium.**

Write, wire or call today for additional facts and figures on Activol Beads.

ELIMINATES DOWN TIME... CRUSHED SHEET MARKS

A Board Mill scouring felts 190′ x 11′ and 235′ x 12′, applies Activol 694 during the papermaking operation, pumping it through a hose line having a flat nozzle. Report—"Activol decidedly superior to Muriatic Acid because crushed sheet marks are entirely eliminated . . . no down time when Activol Beads are used."

ACTIVOL BEADS PROLONG FELT LIFE

This company obtained 9 to 12 weeks as a normal felt life cleaning with Muriatic Acid then following with a detergent cleaner. Activol was tested, hosing solution on to the felt, allowing felt to run about 30 minutes, then rinsing. "Felts were much cleaner than ever before and after running for 13 weeks were examined and found to be in excellent shape. Believe same felts can run considerably longer and attribute it all to the fact Activol did a much more thorough cleaning job."

ACTIVOL BEADS CLEAN PAPER MILL SCREENS ... REMOVE LIME DEPOSITS

This customer uses Activol Beads for cleaning screens on cylinders in the pulp washer and "Save-all" and for removing lime deposits from stainless steel screens. Activol solution plus steam is used by running the cylinders through the solution for eight hours. Activol Beads clean screens and felts *without attacking metal.*

ACTIVOL BEADS REDUCE DOWN TIME ... CLEAN DISCOLORED FELTS

This high grade paper mill manufactures a number of types of colored paper. Every time they change from one color to another, 1½ to 2 hours down time is required to clean the felt and chest on the machine. Previous color must be completely removed from felt. "Activol Beads do such a thorough job on the felts, down time has been reduced 50%, and there is practically no paper waste in changing colors."

HARRY MILLER CORP. HAMICO 4th & BRISTOL STREETS PHILADELPHIA 40, PA.

Manufacturers of:
IMMUNOL, POTENTOL, ACTIVOL BEADS, HAMITERGE, DEFOAMERS, TAR SOLVENTS

HARRY MILLER CORP.

Original Products and Processes Since 1936

4th & BRISTOL STS. • PHILADELPHIA 40, PA. • DAvenport 4-4000

Service Representatives in Principal cities

NEW LITERATURE

Chem-O-Feeder
Model 1331

Covers a low-cost, positive displacement pump for feeding concentrated corrosive chemicals in the chemical and air conditioning fields and general industry. Also includes a flow diagram and a list of features. Bulletin 1331.20-1. B-I-F Industries, Inc., 345 Harris Ave., Providence 1, R. I.

Clarklift
Fork Trucks

Gives complete specifications and operating advantages of three low silhouette powered fork trucks which are primarily for low clearance operations such as loading and unloading highway trailers. Bulletin SS-2201. Clark Equipment Co. Industrial Truck Div., Battle Creek, Mich.

Model F-50T4
Electric Truck

Carries full specifications for this 4,000-lb. capacity truck, along with diagrams, photographs and a detailed analysis of each main working part of the truck, including the Acro-Smooth control. Folder. Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, Ohio.

Model NM
Napkin Machine

Includes both overall and closeup illustrations as well as a schematic diagram of this machine which is designed for high-output production of napkins. Bulletin 130. Dietz Machine Works, Inc., 20 W. Berkley St., Philadelphia 44, Pa.

Multi-Range Expanded-Scale
Speed Recorder

Discusses application, features, principles of operation and specifications of their Type HF multi-range strip-chart speed recorder. Also includes application diagrams, schematic of the recorder and description of accessories. Bulletin GET-2741-3A. General Electric Co., Schenectady 5, N. Y.

Conversion Table and
Color-Difference Meter

Offers a conversion table for Rd/L values for the convenience of those who report the magnitude of color-difference in terms of N.B.S. units. These values are in strict accord with governing ASTM specifications, and avoid intercalibration difficulties, as well as instrumental errors, in reading L values from dials. Gardner Laboratory, Inc., P.O. Box 5728, Bethesda 14, Md.

Properties of TKPP
Detergents

Include chemical analysis and physical constant tables of these detergents, as well as description of solution clarity, solubility, stability, sequesting action and synergistic value. Included as well are typical formulations for general-purpose liquid detergents and a liquid home laundry detergent. Data Sheets. Inorganic Chemicals Div., Monsanto Chemical Co., 800 N. Lindbergh Blvd., St. Louis 66, Mo.

Lorain 760
Moto-Crane

Contains illustrated sales copy and lists features, among which are "Power-Set" Outriggers and their patented "Shear Ball" connection. Bulletin 85743-9A. Thew Shovel Co., Lorain, Ohio.

Monomast
Upright

Gives unsurpassed forward visibility for the lift truck operator and is available on Hyster Challenger and Hyster SpaceSaver trucks. Brochure. Hyster Co. P.O. Box 846, Danville, Ill.

Chempump Composite
Curve

Shows ranges of sealless leak-proof Chempumps. Fostoria Corp., P.O. Box 35-10, Huntingdon Valley, Pa.

Design Guide for
New Paper Products

Provides 18 new and potentially large volume applications for liquid-resistant paper and paperboard products. This book is beautifully illustrated in color and is the result of work with industrial designers and artists to develop applications that would be practical, economical, convenient and attractive. Monsanto Chemical Co., 800 N. Lindberg Blvd., St. Louis 66, Mo.

"See?—Ideal for handling your paper rolls."

PR Guide for
Paper Merchants

Items in the kit include (1) list of subjects that form the basis for legitimate press releases; (2) detailed direction on how to prepare news releases, and maintain good relations with editors and reporters; (3) sample releases and (4) a model speech. Scott Paper Co., Chester, Pa.

Servo-Gauge
Oscillator

Explains the principle of operation, lists design data and describes typical applications of Model 20, a pneumatically actuated timer adjustable from 0.3 to 60 complete cycles a minute. Bulletin P-20. Automatic Control Equipment, Inc., P.O. Box 136, Coraopolis, Pa.

Variable Speed
Pulleys

Describes their full line plus related equipment. Also includes selection and operating data, horsepower, ratings, dimensions and representative applications for a wide variety of sizes and models. Catalog. Lovejoy Flexible Coupling Co. 4949H, W. Lake St., Chicago 44, Ill.

Sliding Gate Regulators
and Control Valves

Tells how steel strength is obtained at the cost of iron by using ductile iron. Also gives composition, properties, specifications and test results. Bulletin J-D1. OPW-Jordan, 6013 Wiehe Rd., Cincinnati 13, Ohio.

Speedfax
Catalog for 1960

Provides information on standard and engineered products in fast-reference form to aid in selecting equipment for industrial plant and commercial building electrical distribution systems. I-T-E Circuit Breaker Co., 1900 Hamilton St., Philadelphia 30, Pa.

Wood's
Ultra-V Drives

Gives useful information on a drive said to reduce overall drive dimensions by as much as 50 per cent, save up to 25 per cent in weight and up to 30 per cent in cost. Bulletin 9102. T. B. Wood's Sons Co., Chambersburg, Pa.

Vertifoil
Pulp Screen

Tells what it is, how it works, why it will last and how it adjusts to any pulp while running. Also gives complete specifications. Bulletin KW-689. Koehring-Waterous Ltd., Brantford, Ont., Canada.

A SKILLED HAND IN CHEMISTRY . . . AT WORK FOR YOU

NOPCOSANT®

...for pitch dispersing

...for slime control

...for size stabilizing

...for coating fluidizing

...for uniform dyeing

You will find it worth your while to get all the facts about Nopcosant—Nopco's newly improved dispersant and solubilizer. Ask your Nopco representative or write for complete information. Remember, too, back of every chemical made by Nopco for the paper industry stands Nopco Technical Service—an experienced staff ready to assist with laboratory data and recommendations based upon your specific requirements.

Properties of NOPCOSANT

A fine powder of uniform particle size

★

Dusts less than any other similar product

★

Lightest colored product of its type

★

One of the most rapidly dissolving products available

★

Most nearly natural *p*H in its chemical class

NOPCO CHEMICAL COMPANY
60 Park Place • Newark, N.J.

NOPCO®

Plants:
Harrison, N.J. • Richmond, Calif. • Cedartown, Ga. • London, Canada

ACCURACY BEGINS HERE.....

and goes ON...

...and ON..

...and ON..

...and ON..

...and ON..

...and ON..

...and ON..

...and ON..

...and ON..

Accuracy begins with the diamond-shaped orifice of DeZurik Vee Port Control Valves. Because it retains the same shape throughout the control range, the orifice will never plug or pack with stock. Control is accurate, positive and constant!

The actuator on DeZurik Control Valves responds instantly, reacting to minute variations in signal. The characterizing feature of the positioner will produce almost any desired throttling characteristic simply by changing the cam in the positioner.

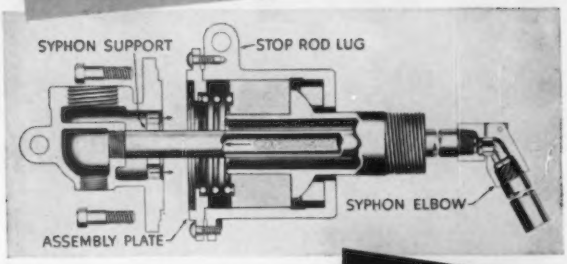
For accuracy *where* you want it—*when* you need it—specify DeZurik Vee Port Control Valves.

For more information on DeZurik Control Valves write for Bulletin 300.

DeZURIK CORPORATION
SARTELL, MINNESOTA

The right rotary joint for every need!

- . . . ON PAPER MACHINE DRYERS
- . . . CORRUGATORS
- . . . CALENDERS
- . . . ROOFING MACHINES
- . . . WAXERS
- . . . EMBOSSERS
- . . . PRINTING PRESSES



Type "SBP" shown is completely self-supporting. Like all Johnson Joints it has no packing, needs no lubrication or adjustment. The syphon elbow replaces unwieldy curved condensate drainage pipes with two straight pipes, hinges to pass right through the joint. Write for Bulletin S-3002. Johnson Rotary Pressure Joints are available for all operating speeds, pressures, mountings.

Johnson ROTARY PRESSURE Joints First in the Paper Industry

THE JOHNSON CORPORATION
828 Wood St., Three Rivers, Michigan

University of Maine Lectures on Pulp and Paper Manufacture

SERIES NO. 2

A Valuable Textbook for the Paper Industry

Embracing the Complete Lectures as given at the University of Maine.

Three hundred and seventy-three pages and an additional 4-page colored insert of up-to-date material covering a broad field in both pulp and paper making and including many fine illustrations and diagrams.

For students expecting to enter the industry who wish to increase their knowledge and improve their positions, this textbook offers a complete education in pulp and paper manufacture.

For executives, superintendents, chemists, engineers and others whose knowledge of the industry is more comprehensive, this textbook will be invaluable as a reference for providing figures, process details, etc.

LOCKWOOD TRADE JOURNAL CO., Inc.
49 West 45th Street, New York 36, N. Y.

Send postage prepaid, Remittance with order. . . . copies of UNIVERSITY OF MAINE LECTURES, bound in Cloth at $5.00 per copy.

All New York City Orders are Subject to a City Sales Tax

Name .....

Street ..... *City and State* .....

....., 19..... *Ordered by* ... .

"Known by the Reliability of its Service as well as the Quality of its Product"

GREAT EASTERN

Quality
Service
Reliability

GREAT EASTERN

PACKING & PAPER STOCK CORP.

53-01 GRAND AVENUE, MASPETH 78, NEW YORK • EVERGREEN 6-2561
STATION & HALLECK STREETS, BOSTON 20, MASS. • GARRISON 7-5720
SALES OFFICE: 292 PARK AVENUE, NEW YORK 17, NEW YORK • YUKON 6-7840

Knox Felts

KNOX WOOLEN COMPANY

CAMDEN, MAINE

America's First Manufacturer of Endless Paper Machine Felts

Another Plant To Serve You

PACKING PLANTS
CHICAGO, ILL.
WASHINGTON, D. C.
CAMDEN, N. J.
KALAMAZOO, MICH.
LOUISVILLE, KY.

SHIP US IN KALAMAZOO

THOMAS PAPER STOCK CO.
1500 N. Hooker St. MO-4-5700 Chicago 22, Ill.

PAPER TRADE JOURNAL

CLEARING HOUSE

HELP WANTED—$1.25 a line. Minimum charge $5.00
SITUATIONS WANTED—$1.25 a line. Minimum charge $5.00. If repeated ½ rate will be charged for each consecutive repetition.

FOR SALE—$1.25 a line. Minimum charge $5.00.
WANTED—$1.25 a line. Minimum charge $5.00.
OPPORTUNITIES—$1.25 a line. Minimum charge $5.00.

Classified advertising space may also be purchased at $7.00 per single column inch. All classified advertisements are payable in advance.
If box number is used—75 cents additional
Address replies to advertisements appearing under Box Number in care of PAPER TRADE JOURNAL, 49 West 45th Street, New York 19, N. Y.

Help Wanted

PAPER MEN

$5,000 to $50,000

SALES • PRODUCTION • TECHNICAL

Finding and landing THE ONE BEST JOB requires sound analysis, careful planning, proper contacts and skillful negotiation.

Paper men ourselves, and the only recognized professional specialists in the world in our particular field, we assist responsible paper men to accelerate their careers by uncovering and developing THE SPECIFIC SITUATION that most exactly fits the needs of each individual we serve.

If you seek to better yourself, and your performance to date entitles you to our endorsement, we can and will help you. Contact us in absolute confidence for information regarding procedure.

GEO. M. SUNDAY & ASSO.

PERSONNEL CONSULTANTS TO THE PULP, PAPER & ALLIED INDUSTRIES
6 East Monroe, Chicago ANdover 3-1970

Help Wanted

TECHNICAL DIRECTOR

(Paper Board)

Chemical Engineer or Chemist with a minimum of 5 years technical experience in the Paper Board field.

Position involves development, installation and supervision of quality control methods and standards, product and process development and application engineering.

This is a growth potential position at our Missisquoi Specialty Board Division, Sheldon Springs, Vt.

For consideration send detailed resume including salary requirements to:

Director of Personnel

STANDARD PACKAGING CORPORATION

200 East 42 St. New York 17, N. Y.

F-8

Help Wanted

WANTED
SKILLED PAPER MAKERS

For modern 500 ton Beloit Kraft Liner board machine scheduled for operation in July 1960. High speed, duplex liner experience essential. Good opportunity for young, aggressive machine tenders, back tenders, winder men, fourth hands, and junior stock preparation men. Write Waldorf Hoerner Paper Products Company, Box 1507, Missoula, Montana. Attention: L. L. Karnath, Paper Mill Superintendent, stating in a resume complete work experience, education, age, etc.

F-29

ENGINEER

We have an opening for a graduate chemical or mechanical engineer with fibreboard or pulp and paper experience to assist supervising project engineer in all phases of engineering on insulation board and similar products. Work will include cost estimates for new plants, design, plant problems, etc. Some travel will be required.

Write to Personnel Manager

BARRETT DIVISION

ALLIED CHEMICAL CORP.

40 Rector Street
New York 6, N. Y.

F-22

ENGINEERING OPPORTUNITIES

We are a fast-growing paper manufacturer located in northeastern Wisconsin. We are still only medium-sized and have kept our informality and flexibility. Our engineers handle interesting work with a lot of variety and plenty of opportunity to use their own discretion and judgment. As a man shows his ability, he can get ahead rapidly. If you are an engineer who is working for a large company and who feels weighed down and frustrated by dull, routine duties ,this may be just the opening you are looking for.

We need qualified men in the following fields:

MECHANICAL ENGINEERS **ELECTRICAL ENGINEERS**
CHEMICAL ENGINEERS **DRAFTSMEN**

In addition to excellent starting salaries, we offer a well-rounded employee benefit program with group life and group hospital and surgical insurance paid for by the company and an outstanding profit-sharing retirement plan.

If you are interested, please write us, giving your complete personal and business history, which will be held in strict confidence.

FORT HOWARD PAPER COMPANY

GREEN BAY, WISCONSIN

F-15

WANTED

GRADUATE MECHANICAL ENGINEER

Excellent opportunity in Engineering Department of modern pulp and paper mill for Project Engineer with experience, preferably in pulp and paper industry—to work on variety of mill engineering projects, such as New Construction, Plant Alterations, Process Changes, etc.

Send resume to:

Personnel Department
P. H. GLATFELTER CO.
Spring Grove, Pa.
Phone—Spring Grove 3216

F-8

Help Wanted advertisements continued on page 60

SUPPLIERS OF PAPER MACHINERY TO THE WORLD — RPM

ROSS PAPER MACHINERY CO.

265 PASSAIC STREET • NEWARK 4, NEW JERSEY

Cable Address: "JACKROSS Newark: N.Jer" HUMBOLDT 2-2177

CANADA — 199 BAY STREET • TORONTO, ONTARIO • EMPIRE 4-5041

SOUTH — P. O. BOX 2065 • MOBILE, ALABAMA • GREENWOOD 9-1950

QUALITY GUARANTEED MACHINERY ERECTED FOR YOUR INSPECTION

CALENDER STACKS

1— 80" P & J 7 roll; heavy duty
1— 82" Lobdell 5 roll
1— 86" Lobdell 5 roll
1—115" B-C 7 roll
2—124" Downingtown 5 roll & 6 roll
1—128" Downingtown 7 roll

CHIPPERS

1— 88" Murray 10 knife w/600 hp motor
1— 96" Murray 6 knife; A-F Brng.

COATERS

1— 24" Waldron Coater & Embosser
2— 40" Chapman Extrusion Type
3— 65" & 76" Mayers

COMPLETE MACHINES

3—Sandy Hill 81" trim single cyl. Tissue
1—M & W 72" Fourdrinier paper machine

CYLINDER MOLDS

2— 63" face x 36" dia w/rubber couches
1—104" face x 36" dia
1—107" face x 48" dia; A-F Brng
2—111" face x 36" dia; A-F Brng
1—131" face x 42" dia.; A-F Brng
1—136" face x 54" dia; SS covering

CYLINDER WET ENDS

Downingtown single cylinder; 99" face x 48" dia.; 18" dia. couch

DRYERS—HYDROSTATICALLY TESTED

24" Dia.:
38—46" face; Chrome plated
1—156" face w/gear and steam joint

28" Dia.:
3— 70" face w/gears & bearings
3— 73" face w/gears & bearings
3— 76" face w/gears & bearings
3— 77" face w/gears & bearings
2— 84" face
2— 84" face w/accessories

36" Dia.:
1— 42" face
2— 44" face
2— 46" face
4— 70" face w/gears & bearings
11— 72" face w/gears & bearings
1— 74" face Lukenweld w/A-F Brng
1— 74" face w/gears & bearings
3— 75" face w/gears & bearings
9— 76" face w/gears & bearings
1— 77" face w/gears & bearings
1— 78" face w/gears & bearings
2— 80" face
5— 84" face
3— 88" face
18— 90" face; complete section
1—138" face
10—160" face

42" Dia.:
24—102" face; complete section
1—110" face
40—118" face; complete section
1—120" face
1—160" face

48" Dia.:
57— 46" face; chrome plated
13— 82" face; complete section
5— 84" face
24—110" face w/frames & bearings
10—123" face w/gears, frames & bearings
1—128" face

DRIVES—ENCLOSED RIGHT ANGLE

1—Michigan 92½ h.p. ratio 10.1 to 1
1—50 h.p. Reliance VS with MG set & controls; 850-1200 r.p.m.
1—Beloit 65 h.p. Ratio 2.88 to 1
1—Phila. 28 h.p. Ratio 10.56 to 1

EMBOSSERS

1— 80" Hudson Sharp; A-F Brng
2— 62" Textile Machinery Co; w/drives

FILTERS—STEEL VATS

1—New Oliver 7' dia American 7 disc; all SS; Reliance Drive
1— 6' face x 3' dia Dorr-Oliver
1— 10' face x 8' dia Oliver chem. sludge filter

FLAT SCREENS

2— 12 Plate IMPCO w/Dunbar Drives
1— 4 plate Tailing Screen

INLETS & HEADBOXES

1—112" Valley w/8" distributing roll

JORDANS

2—Appleton #1 w/A-F Brng
1—N & W Pony w/75 h.p. motors
1—Horne w/AF Brngs

MOTORS 3 PH 60 CYCLE

1—100 hp GE; 440 v; 695 rpm
2—100 hp GE; 440 v; 430 rpm
1—350 hp GE; 2200 v; 720 rpm: Synch

PAPER MACHINES DRIVES

1—De Laval 100 h.p. steam turbine w/reducers

PULPER

1—Dilts 16 ft. complete w/125 h.p. motor, elec. hoist & oil pump

PUMPS—OPEN IMPELLER

1—Shartle 8 x 16 Triplex
23—Centrifugal Stock and Water Pumps

REELS

1— 36" Kohler Automatic 2 arm unwind reel
1—100" Kohler automatic two arm unwind reel; 60" dia rolls; new condition
1—116" Downingtown two bowl A/F Brngs
1—123" Beloit—2 bowl
1—126" Beloit Aldrich surface drive type
1—150" B & S pope type w/Reliance drive

REFINERS

2—#1 Claflin; A-F Brng
1—24" Bauer Double Disc w/two 50 h.p. motors
1—24" Downingtown Weiner; new
1—Model 185E Bauer w/two 150 h.p. motors
2—Model 410-1 40" Bauer; w/two 400 h.p. motors each; used 6 mos.

ROLL GRINDERS

1—124" x 30" Farrel w/crowning device
1—208" x 32" Farrel w/crowning device

ROLLS

Distributor—Stainless Steel
2— 8" dia. x 115" face
1— 6¼" dia. x 115" face

Couch—Rubber Covered
1—14" dia. x 158" face
2—15¼" dia. x 136" face
1—16" dia. x 96" face
2—16" dia. x 198" face
3—17½" dia. x 135" face
1—18¼" dia. x 84½" face
1—18" dia. x 108" face
2—16" dia. x 65" face

Press—Rubber or Brass Covered
71 Miscellaneous sizes. Drawings available

Felt—Steel, Brass, Rubber Covered
335 Miscellaneous sizes. Drawings available

Calender—Chilled Iron
72 Miscellaneous sizes. Drawings available

ROTARY SCREENS

5—Bird #3A, Model 100 w/SS or copper vats
1—Jones Leithwalk copper lined

SHEETERS—DOUBLE KNIFE

1—157" Masson-Scott; like new

SHEETERS-SINGLE KNIFE

1— 36" Beck w/layboys & backstand
6— 56", 60", 66", & 70" Hamblets w/backstands
1— 65" Kidder w/elec. eye and layboy
2— 82" Hamblets w/backstands & layboys
1—105" Hamblet
1—110" Hamblet w/layboy
1—112" Hamblet Heavy duty, roller bearing, w/layboy, backstand, monorail, etc. New 1954

SLITTERS AND REWINDERS

18" Maximum Rewind Diameter
1— 72" Cameron Type 26-3 A Duplex

24" Maximum Rewind Diameter
1— 32" Cameron Type 6
3— 42" Cameron Type 6
1— 42" Cameron Type 6 Shear Cut
2— 48" Langston Duplex Shear Cut
2— 52" Cameron Type 6
1— 62" Cameron Type 8
1— 72" Cameron Type 9-5

30" Maximum Rewind Diameter
1— 42" Essex Duplex Shear Cut; A-F Brng
1— 42" Cameron Type 28-3 duplex
1— 60" Langston Shear Cut
1— 62" Cameron Type 6
1— 72" Cameron Type 10; A-F Brng
1— 72" Cameron Type 10 Shear Cut; A-F Brng
1— 92" Cameron Type 28-3 Duplex w/Vari-Drive

36" Maximum Rewind Diameter
1— 62" Cameron Type 8
1— 70" Variable Speed Center Winder
1— 72" Cameron Type 10; A-F Brng

42" Maximum Rewind Diameter
1— 40" Egan Shear Cut; A-F Brng
1— 60" Kidder Model SH Low Bed
1— 72" Beloit Shear Cut
1— 82" Langston Shear Cut; A-F Brng
1— 92" B & S; A-F Brng
1—136" Cameron Type 18; A-F Brng

48" Maximum Rewind Diameter
1— 86" M & W Four Drum Shear Cut
1—114" Langston
1—152" Langston Shear Cut

60" Maximum Rewind Diameter
1—110" Cameron Type 18 w/Motor Drive
1—120" M & W two drum w/75 h.p. drive
1—136" Langston Type DA Shear Cut; A-F

STOCK CLEANERS

2—1000 g.p.m. Shartle Hydrafuges w/motors
14—Bird Dirtecs; 2" & 6" bronze
1—Bird Dirtec 12". Rebuilt by Bird

SUPERCALENDERS

2— 30" Norwood 4 roll
1— 63" Norwood 8 roll; A-F Brng
1— 65" Norwood 8 roll; A-F Brng
1— 92" Norwood 7 roll w/drive

SUCTION EXTRACTOR ROLL—DOWNINGTOWN

1—105" face x 19" dia.

TRIMMERS—POWER BACK GAUGES

2— 38" Seybold w/motors
1— 57" Seybold Precision
3— 65", 74", & 84" Seybold Daytons
2— 74" & 84" Seybold 12Z w/air tables
1— 94" Seybold Precision w/air table

VACUUM PUMPS

7—H-4, ½H-5, & H-5 Nash
2—K-4 & K-7 (new) Nash
3—L-5JL-7 Nash
4—#2, #3, #4, #6 & #7 Nash Hytors
1—8 x 10 Connersville
2—MD-2 Nash w/motors; new laboratory models
1—L-6 Nash w/40 h.p. motor

YANKEE DRYERS

1—132" face x 10' dia Beloit; 35 psi

TECHNICAL SUPERVISOR
WANTED

Young technically trained graduate with five to ten years experience in the paper industry to take charge of technical control and service in a Mid-western specialty mill. Exceptional opportunity for a competent and ambitious man with the opportunity to advance to positions of greater responsibility in production. Excellent benefits and a good starting salary. Please reply to Box 60-20, Paper Trade Journal, giving resume of experience and education as well as references.

F-8

DEVELOPMENT ENGINEER

Here is a top opportunity for a graduate Ch.E. experienced in polyethylene extrusion to join the research and development team of a growing national flexible packaging manufacturer. The man hired will be responsible for operation and development work for a pilot plant extruder. Salary open. Write Don McConnell, giving full details.

The RAP-IN-WAX Company
150—26th Ave., S.E. Minneapolis 14

F-15

MECHANICAL ENGINEER

Large Paper board mill in Michigan has opening for an experienced M.E. for diversified work in plant engineering. Opportunity to be closely associated with process as well as plant engineering. Activities of an expanding, progressive company. Graduate Engineer preferred. Salary commensurate with experience, replies treated confidentially. Send complete resume including salary requirements to Box 60-26 c/o Paper Trade Journal.

F-15

SUPERINTENDENT

Experienced in production of specialty papers, to take charge of department with a fourdrinier and impregnating-saturator. Southeastern state. Salary open. Write Box 60-25 care Paper Trade Journal.

F-22

Wanted by an old established successful Company, located in a large midwest city, specializing in coarse and waterproof papers especially for industrial uses, a man to act as an Assistant Manager in charge of sales. Must not be over 50 years old, with a history of success who is conversant with these lines. Excellent starting salary with promise of promotion. References required. Confidential. Box 60-34 care Paper Trade Journal.

F-8

Maintenance Engineer

Experienced engineer to take charge of maintenance in a 250 ton pulp and paper mill in mid-west location. Position provides excellent opportunity with new and growing organization. Replies will be treated confidentially. Please include resume of education and experience. Write to Box 60-30, c/o Paper Trade Journal.

F-15

FIELD SALES OPPORTUNITIES

Expanding dye and chemical sales to the paper industry offer opportunities for experienced and capable men to augment our present sales staff. Applicants should have prior color sales experience to this industry or be well versed in the application of dyes to paper. Remuneration will depend on ability and experience. Please submit complete resume and salary requirements. All inquiries will be reviewed and answered. Box 60-21, care Paper Trade Journal.

F-8

FOREMAN WANTED

for converting plant—must have experience on facial tissues, toilet tissues and napkins. Good Future.

Tissue Products Co. Inc.
2472 Third Avenue, Bronx 54, N. Y.
Telephone Melrose 5-6163

TF

WISCONSIN BOARD MILL HAS OPENING FOR AN EXPERIENCED TOUR BOSS. MUST BE WELL ACQUAINTED WITH MANUFACTURE OF FOLDING AND SETUP GRADES. GOOD OPPORTUNITY FOR THE RIGHT MAN. IF INTERESTED, WRITE TO US, GIVING A COMPLETE SUMMARY OF YOUR BACKGROUND. ALL INQUIRIES WILL BE TREATED AS CONFIDENTIAL. ADDRESS BOX 60-32 CARE PAPER TRADE JOURNAL.

F-22

WANTED

A Turbine Operator for a Municipal Power Plant with 9,500 K.W. generating capacity. We are interested in a man with a good background in steam engineering. Address Box 60-31 care Paper Trade Journal.

F-22

BARGAINS
IMMEDIATE DELIVERY

1—86" Farrel 8-Roll Calender Stack. A. F. Bearings. Full set of Doctors.
1—8" Pusey & Jones 7-Roll Calender Stack.
1—30" Dia. x 130" Face Farrel Roll Grinder., Complete.
1—5' x 86" Pusey & Jones Yankee Dryer.
1—92" Langston Winder equipped with both score and shear cut slitter devices.
1—86" Warren Winder Complete. Recently rebuilt with new drums and new A. F. Bearings and Housings.
1—110" Pusey & Jones 2-Drum Winder. A.F. Bearings.
1—84" Kamyr Machine. 75 Ton per day.
10—48" x 150" Pusey & Jones Dryers.
7—36" & 72" Pusey & Jones Dryers.
1—E. D. Jones Majestic Jordon No. A-482. S.S. Fillings.
1—74" Seybold Trimmer & Cutter Z-12.
1—45" Seybold Trimmer & Cutter with 5 H.P. 220/440 Volt Motor. Rebuilt.
1—42" Dia. & 110" Face Pope Reel.
1—25" Dia. x 156" Perforated Face Sandusky Suction Couch. Complete.
1—22" Dia. x 138" Perforated Face Sandusky Suction Couch. Complete.
1—22" x 111" Vertical Size Press with Microrock and Rubber Rolls. A. F. Bearings with frame work. Pneumatically loaded.
1—24" x 102" Extractor Rolls. 20" Dia. Rubber Top Roll mounted with A. F. Bearings and Frame work. Spare Rolls.
1—22" x 96" First Press with Microrock Roll and Rubber Roll.
1—22" x 110" Press with Microrock Roll and Rubber Roll.
1—10-Knife Carthage Chipper with A. F. Bearings.
1—A.P.P. Rotary Centrifugal Pulp Screen. 40" Dia. x 42" Face. Serial #1274227.
1—#3A Bird Screen. S.S. Plates.
1—Hudson Sharpe Toilet Tissue Converting Machine. Serial #2123.
2—Packer 12-Plate Flat Screens. S.S. Bodies #.22 S.S. Plates. Less than 5 Years Old.
1—36" x 96" Saveall, Rubber Couch, S.S. Vat, A.F. Bearings.
1—Hummer Vibrating Screen.
1—Seybold Knife Grinder. Size G. 84" Table. Serial #4X802.
1—Sandy Hill Sulphur Burner. Complete.
1—54" Dia. x 48" Face Valley Iron Tub Beater.
1—53" Dia. x 66" Face Dilts 2000-lb. Iron Tub Beater with S.S. Hood.
16—Beater Rolls and Stands. Various Sizes.
5—Triplex and Duplex Pumps. Various Sizes.
1—DeZurick Consistency Regulator. Complete. One year old, never used.
1—8' x 10' Oliver Continuous Filter. Steel Tub.
1—100 H.P. Terry Turbine, Type G, 3615 RPM, 250 lbs. Steam Pressure. Back Pressure 35 lbs. Fully automatic with Terry Speed Reducer.
1—No. 2 Jones Pulper. A.F. Bearings. Spare Worm.
1—250 H.P. Ingersoll-Rand Diesel Engine Generator Set—G.E. Generator, 150 KW, 480 Volts, 720 RPM.
3—75 KVA G.E. Spirakore Transformers, Type HS, Class OA, 2400/4160 Y Primary to 120/240 Secondary.
1—60 H.P. G.E. Gear Motor, T.E.F.C. 440 Volts, 1730 Max./427 Min. RPM, 4.15 to 1 Ratio.
1—15 H.P. West. Gear Motor, T.E.F.C. 220 Volts, 87 RPM.
1—7½ H.P. West. Gear Motor, T.E.F.C. 550 Volts, 1165 RPM to 29 RPM.
1—7½ H.P. G.E. Gear Motor, T.E.F.C. 220/440 Volts, 1738 RPM, 9.2 to 1 Ratio.
1—Horton Clutch, AF. Bearings.

1000 Electric Motors from ¼ H.P. to 600 H.P. in Stock

The above is but a small part of the inventory we carry. We can furnish you with almost anything in the line of paper mill, electrical and machine shop equipment.

Write—Wire—Phone For Your Needs

RUDERMAN MACHINERY EXCHANGE
GOUVERNEUR, NEW YORK
Telephone 333-324

TF

Situations Wanted

CHEMICAL ENGINEER

Nine years of wide development experience in P&P and related industries. Would like to head a Chemical Company group concerned with increasing sales and developing new chemicals for pulp and paper. Salary $9,000 to $10,000. Address Box 60-33 care Paper Trade Journal. F-8

Available—Sr. Mechanical Engineer with a very extensive background in the pulp, paper and board industry as Chief engineer, plant engineer and production supervisor. Experienced and qualified to supervise or assist in mill, power or electrical modernization or construction programs. Well versed in labor relations. Invites correspondence. Address Box 60-14 care Paper Trade Journal. F-8

Highly Experienced Practical Paper maker, age 47, with 29 years experience on most grades of paper seeks new position as Superintendent or assistant. Fine paper preferred. Write Box 60-22 care Paper Trade Journal. F-15

EXECUTIVE - WORK MANAGER

—in manufacture of boards & papers; their conversion; and film. Wishes change for challenging opportunity. Successful record in production; organization; labor relations, & development. Address Box 60-10 care Paper Trade Journal. F-29

GENERAL SUPERINTENDENT

Technical & practical experience. Superior record in production. Extensive experience all fine & specialty grades, News & Kraft. Thorough knowledge of Stock preparation.

Address Box 60-19 care of Paper Trade Journal. F-8

Gen. Superintendent or Supt.

Experienced paper maker. Extensive experience in the manufacture of folding, setup and pat. coated board. Familiar and capable of solving all problems that arise in manufacturing of board, power and maintenance. Presently employed. Box 59-346 Care Paper Trade Journal. F-8

SUPERINTENDENT or Manager — 25 years experience in fine Papers, Tissues, Towels, Newsprint. All types machines, incl. hi-speed Yankees. Address Box 60-7 care Paper Trade Journal. F-15

Business Opportunity

Independent U.K. Paper Mill specializing in Technical Papers seeks opportunity to manufacture or convert under licence from American Company. Current Production includes multiply papers with Hemp Furnishes. Extensive facilities and experience in impregnation, coating embossing and other converting operations. Capital available. Box No. 3152 c/o Charles Barker & Sons Limited, Gateway House, London, E.C.4. F-8

Wanted

WANTED
LIME KILN

MINIMUM DIAMETER 8'0"
MINIMUM LENGTH 140'0"
MAXIMUM LENGTH 200'0"

IF KILN OF THESE GENERAL DIMENSIONS AVAILABLE WOULD LIKE TO INSPECT WHILE STILL IN OPERATION

ADDRESS ALL CORRESPONDENCE ATTENTION:

Purchasing Department

The D. M. Bare Paper Co.

Roaring Spring, Penna. F-8

WANTED

Used Vac. Filter Washer for Wood Pulp. Approx. Size 8 x 12. Contact

Crandon Paper Mills
Fort Madison, Iowa
Tel. DR. 2-3152 F-8

Sales Representation

SALES REPRESENTATIVE

Leading manufacturer of paper machine specialty equipment desires to contract qualified man for sale of equipment in South America and Central America. Should be in the 35 to 45 age range and presently handling similar accounts. Submit resume to Box 60- care Paper Trade Journal. TF

FIELD SALES OPPORTUNITIES

Expanding dye and chemical sales to the paper industry offer opportunities for experienced and capable men to augment our present sales staff. Applicants should have prior color sales experience to this industry or be well versed in the application of dyes to paper. Remuneration will depend on ability and experience. Please submit complete resume and salary requirements. All inquiries will be reviewed and answered.
Box 60-21, care Paper Trade Journal. F-8

BUY U. S. SAVINGS BONDS

Wanted

WANTED

Fourdrinier Yankee Machine new or second-hand in good working condition for production of lightweight MG paper, 120" trim or slightly wider. Yankee Dryer 10 ft. or larger.

Letters with all technical data, price and delivery to be directed to

Bunzl Pulp & Paper Ltd.
21/4, Chiswell Street,
London, E.C.1, (England) F-8

For Sale

NOTICE

HAVING PURCHASED THE COMPLETE EQUIPMENT OF LITTLE FALLS PAPER CO., NEWBURGH, N. Y., WE OFFER THE FOLLOWING PAPER MACHINES WITH THEIR AUXILIARIES, SUBJECT TO INSPECTION ON ORIGINAL FOUNDATIONS, AT ATTRACTIVE PRICES:

Arrangements can be made for dismantling and loading, at reasonable prices.

1—90" Moore & White Harper Fourdrinier complete, 13 dryers, calender stack, reel, winder, enclosed angle drives, etc.

2—90" Sandy Hill Single Cylinder Paper Machines, each with 9 dryers, calender stack, reel, winder, enclosed angle drives, etc.

The above machines made high grade Manila, Waxing, Anti-Tarnish Kraft, Manifold, Pattern Tissues and colored specialties. They are in the same serviceable condition as when operating. Priced for quick sale.

OSBORNE PAPER MILL EQUIPMENT CORP.
Fulton, New York Ly-2-4254 F-8

FOR SALE

1—No. 1 E. D. Jones PULPMASTER Pulper, anti-friction bearings, with drive and hydraulic discharge valve. New 1952, used less than 1 year. Excellent condition.

J. J. Ross Company
377 Frelinghuysen Avenue
Newark 12, N. J.
Bigelow 3-3720 F-15

YOUR POSTMASTER SUGGESTS:

FOR FASTER AND MORE EFFICIENT POSTAL SERVICE . . . LEARN THE "A.B.C.'S" OF GOOD MAILING HABITS!

A postal delivery zone number helps speed your mail!

B certain to include your return address on all letters and packages!

C that the delivery address is correct and complete!

AND — MAIL EARLY IN THE DAY — IT'S THE BETTER WAY!

ADVERTISERS

Albany Felt Co ..... —
Allis, Louis Co. ..... —
Allis Chalmers Mfg. Co. ..... —
American Bitumuls & Asphalt Co. ..... —
American Bridge Div., U. S. Steel Corp. ..... —
American Cyanamid Co., Paper Chemical Dept. 43
Dyes Dept. ..... —
Organic Chem. Div. ..... —
Pigment Dept. ..... —
American Paper & Pulp Co. Inc. —
American Potash & Chem. Corp. ..... —
American Steel & Wire Co. .. —
Ames Company Inc. ..... —
Anglo Paper Products Ltd. .. 51
Annin Company ..... —
Antara Chemicals, Sales Div. Gen. Aniline & Film Corp. .. —
Apmew, Inc. ..... —
Appleton Machine Co. ..... —
Appleton Wire Works ..... —
Armco Drainage & Metal Prod. Co. ..... —
Armco Steel Corp. ..... —
Armstrong Machine Works ... —
Asten-Hill Mfg. Co. ..... —
Atherton, James, Ltd. ..... —
Atlantic Coast Line R. R. ..... —

Babcock & Wilcox Co. ..... —
Bahr Brothers Mfg. Co. ..... —
Bailey Meter Co ..... —
Barco Manufacturing Co. ..... —
Bauer Bros. Co. 9
Becco Chem. Div. Food Machy. Corp. 21
Beloit Iron Works Co. Bet. 18 & 19
Binet, Louis et Cie ..... —
Bird Machine Co. 17
Bixby, R. W., Inc. ..... —
Black-Clawson Co. .....Facing 2
Bolton & Sons ..... —
Brandon Sales, Inc. ..... —
Broughton, A. E. & Co. ..... —
Brown Company ..... —
Buckeye Cellulose Corp. 11
Buffalo Forge Co. ..... —
Buffalo Pumps ..... —
Butterworth, H. W., & Sons Co... —

Cady, E. J., & Co. ..... —
Caldwell, Wm. & Co. ..... —
Cameron Machine Co. ..... —
Carthage Machine Co. ..... —
Celgar Ltd. ..... —
Central National Corp. Front Cover
Central Soya Co. .....Facing 10
Ciba Company ..... —
Cities Service Oil Co. ..... —
Clark-Aiken Company ..... —
Classified Advertising 58
Clearing House 58
Cleveland Crane & Engrg. Co —
Coffin Turbo Pump Co. ..... —
Columbia-Geneva Steel Div., U. S. Steel Corp. ..... —
Columbia-Southern Chem. Corp. Sub. of Pittsburgh Plate Glass Co. .....Bet. 50 & 51
Combustion Engrg. Co. ..... —
Conoflow Corp. ..... —
Conveyair Sales Ltd. ..... —
Corn Products Sales Co. ..... —
Crane Company ..... —
Curtiss-Wright Corp. ..... —

Darling & Company ..... —
Davis, Frank H., Co., Inc. ... —
DeZurik Corporation 56
Diamond Alkali Co. ..... —
Dilts Machine Works ..Facing 2
Dodge Mfg. Co. ..... —
Dorr-Oliver ..... —
Dow Industrial Service Div. Dow Chemical Co. ... 2
Doyle, J. E., Co. ..... —
Draper Bros. Co. ..... —
Dryden Paper Co., Ltd. 51
du Pont, E. I., de Nemours & Co., Dyestuffs Dept. ..... —
Electrochemical Dept. 6
Industrial & Biochem. Dept. —
Pigments Dept. ..... —
Dusenbery, John, Co. ..... —
Duverre Inc. ..... —

Eaton Manufacturing Co. Cover 3
Ebasco Services, Inc. ..... —
Egan Frank W., & Co. Facing 3
Electric Mchy. Mfg. Co. ..... —
Elixman Paper Core Co. ..... —
Elwell-Parker Elec. Co. ..... —
English China Clays Sales Corp. —
Export Supplement ...Bet. 34 & 35
Extremultus, Inc. ..... —

Fairbanks Morse & Co. ..... —
Falk Corporation ..... —
Farrell-Birmingham Co. ..... —
Fife Manufacturing Co. ..... —
Fisher Governor Co. ..... —
Fitchburg Screen Plate Co. .. —
Food Mchy. & Chem. Sales Dept., Chemicals & Plastics Div. ..... —
Foxboro Co. ..... —
Frederick Iron & Steel Co. ... —

Garlock Packing Co. ..... —
Gaspesia Sulphite Co. Ltd. ... —
Gates Rubber Company ..... —
Geigy Chemicals Corp., Geigy Dyestuffs Div. ..... —
General Dyestuffs Co. ..... —
General Electric Co. ..... —
General Mills, Inc. ..... —
General Tire & Rubber Co. .... —
Gibbs-Brower Co. ..... —
Gilbert & Nash Co. ..... —
Glidden Company .....Facing 42
Goodrich Chemical Co. ..... —
Goodyear International Corp. ..... —
Goodyear Tire and Rubber Co. ..... —
Gottesman & Co. ....Front Cover
Goulds Pumps 40
Great Eastern Packing & Paper Stock Corp. 52
Grinnell Co., The ..... —
Gurley W. & L. E. ..... —

Hamblet Machine Co. ..... —
Hardinge Company ..... —
Harbison Walker Refractories —
Harris Seybold ..... —
Harshaw Chemical Co. ..... —
Heimbach, Thomas J. ..... —
Hendrick Mfg. Co. ..... —
Hercules Powder Co. ..... —
Hills-McCanna Co. ..... —
Hooker Chemical Co. 3
Houghton & Company ..... —
Huber, J. M. Corp. 41
Hudson Sharp Machine Co. .. 39
Hungerford & Terry, Inc. ... —
Hunt, Rodney ..... —
Huyck Felt Company 44

Improved Machinery, Inc. ... —
Industriplanering ..... —
Ingersoll-Rand Co. ..... —

Jagenberg Werke ..... —
Jenkins Brothers ..... —
Johns-Manville Corp. ..... —
Johnson Corp., The 56
Johnson, Alvin H., Co. ..... —
Jones, E. D., Corp. 20
Jones & Laughlin Steel Corp... —

Kalamazoo Tank & Silo Co. .. —
Kamyr, Inc. ..... —
Kenyon, James, & Son ..... —
Kidder Press Co. ..... —
Kinney Engineers Inc. ..... —
Knox Woolen Co. 57
Koppers Co., Inc. ..... —

Langston, Samuel Co. ..... —
La Papeterie .....Facing 51
Lawson Company ..... —
La Porte Titanium Ltd. ..... —
Layton-Greenfield Inc. ..... —
Lestoil, Inc. ..... —
Link Belt Co. ..... —
Lockport Felt Co. ..... —
Lockwood Directory ..... —
Lockwood Greene Engineers .. —
Lodding Engineering Co. Facing 43
Lukon, Inc. ..... —
Lunkenheimer Co. ..... —
Lyddon & Co. ..... —

Magnus Metal Corp. ..... —
Main, Charles T., Inc. 44
Manchester Machine Co. ..... —
Marathon—A division of American Can ..... —
Mead Pulp Sales, Inc. ..... —
Mercury Engrg. Corp. ..... —
Miller Corp., Harry 53
Millspaugh Ltd. ..... —
Minneapolis-Honeywell 7
Mixing Equipment Co. ..... —
Monsanto Chemical Co. ..... —
Montague Mch. Co. ..... —
Moore & White Co. ..... —
Morden Machines Co. ..... —
Mt. Vernon Mills Inc. ..... —
Murray, D. J., Mfg. Co. ..... —

Nalco Chemical Co. ..... —
Nash Engineering Co. ..... —
National Gypsum Co. ..... —
National Lead Co., Magnus Metal Div. ..... —
National Starch & Chem. Corp. —
National Tube Div., U. S. Steel Inc. ..... —
New Jersey Zinc Co. ..... —
Nichols Eng. & Research Corp. —
Nopco Chemical Co. 55
Norgren, C. A. Co. ..... —
Northeastern Paper Sales 51
Norton Co. ..... —

Oakite Products Inc. ..... —
Ohio Injector Co. ..... —
Olin Mathieson 8

Paper Conv. Mch. Co. Facing 11
Parsons & Whittemore ..... —
Patton Mfg. Co. ..... —
Penick & Ford ..... —
Penn. Ind. Chem. Corp. ..... —
Penobscot Chemical Fibre Co. —
Pennsalt Chem. Corp. ..... —
Perkins, B. F. & Sons, Inc. .. —
Perkins Goodwin Co. ..... —
Permutit Co., Div. of Pfaudler Permutit Inc. ..... —
Pfauldler Permutit Inc., Permutit Div. ..... —
Pioneer Paper Stock Co. ..... —
Potdevin Machine Co. 45
Powell Valves ..... —
Price & Pierce, Ltd. ..... —
Provident Life & Acc. Insurance —

Railway Supply & Mfg. Co... —
Raymond, Charles P., Service Inc. ..... —
Record Fdy. & Mch. Co. ..... —
Red Ray Mfg. Co. ..... —
Rhoads, J. E., & Sons, ... —
Rice Barton Corp. ..... —
Riedel, Gus & Son ..... —
Riegel Paper Corp. ..... —
Robbins Instrument Co. ..... —
Rohm & Haas Co. ..... —
Ronningen-Petter Co. ..... —
Roosevelt Paper Co. ..... —
Ross, J. J., Co. 61
Ross, J. O., Engrg. Co. ..... —
Ross Midwest Fulton Corp. .. —
Ross Paper Machinery Co. ... 59
Ruderman Machinery Exchange 60
Rust Engineering Co. ..... —
Rycrson, Jos. T. & Son 14

Sandoz, Inc. ..... —
Sandy Hill Iron & Brass Works ..... —
Scapa Dryers Inc. ..... —
Scott Testers ..... —
Seaboard Air Line R. R. Co. ..... —
Shartle Div., Black-Clawson Co. .....Facing 2
Shawinigan Resins Corp. ..... —
Sheffield Corp. ..... —
Shuler & Benninghofen ..... —
Shy, C. D. & Company ..... —
Signode Steel Strapping Co. . 52
Sinclair Company ..... —
Sirrine, J. E., Co. ..... —
SKF Industries ..... —
Smidth, F. L. & Co. ..... —
Socony Mobil Oil Co. ..... —
Sonoco Products Co. ..... —
Southworth Machine Co. ..... —
Spraying Systems Co. ..... —
Sprout Waldron & Co. ..... —
Stadler Hurter & Co. ..... —
Staley Mfg. Company Back Cover
Stebbins Engrg. Co. ..... —
Stein, Hall & Co. ..... —
Stephens-Adamson Mfg. Co. .. —
Stone & Webster Eng. Corp.. —
Stowe-Woodward, Inc. 12
St. Regis Paper Co. ..... —
Sunday, George M., Assoc. .. 58

Taylor Instrument Co.'s ..... —
Taylor-Wharton Company .... —
Techno Corp. ..... —
Tennessee Coal & Iron Co..... —
Tennessee Corp. ..... —
Testing Machines ..... —
Texaco, Inc. ..... —
Texas Gulf Sulphur ..... —
Thiele Kaolin Co. ..... —
Thomas Paper Stock Co. 57
Titanium Pigment Corp. 49
Torrington Company ..... —
Turner Halsey Co. ..... —

United Engrg. & Fdy. Co. ... —
U. S. Industrial Chem. Co. Div. of National Distillers & Chem. Corp. 47
U. S. Rubber Company ..... —
U. S. Steel Corp. ..... —
United States Steel Export .. —
United States Steel Supply Co. —

Valley Iron Works 10
Vanderbilt, R. T., Co. ..... —
Virginia Smelting Co. ..... —
Voith, J. M., G. m. b. h. .. —

Waldron-Hartig Div., Midland Ross Corp. ..... —
Waldorf Industrial Controls .. —
Walworth Co. ..... —
Weber, H. G., Company ..... —
West End Chemical Div., Stauffer Chem. Co. ..... —
Westvaco Div., Food Mchy. & Chem. Corp. ..... —
West Virginia Pulp & Paper Co. ..... —
Weyerhaeuser Timber Co. .... —
Wheeler Roll Co. ..... —
Williams-Gray Co. ..... —
Wisconsin Wire Works ..... —
Witco Chemical Co. ..... —
Woodpulp, Inc. ..... —
Wood's, T. B., Sons Inc. .... —
Wyandotte Chem. Corp. ..... —
Wyatt Metal & Boiler Works —
Yarnall-Waring Co. 4

While we strive for accuracy in preparing the above index which is purely a service to our readers, we cannot be responsible for errors.

PAPER TRADE JOURNAL

BUSINESS STAFF

Arthur E. Gordon, Business Mgr.

Francis J. Gordon — Alrick Man

New York 36, N. Y. 49 W. 45th St. Plaza 7-2370
Cable: "Lockmin"

CHICAGO 3, ILL.: H. K. Vinton
Room 1020, 79 W. Monroe St. CEntral 6-2784

PITTSBURGH 11, PA.: H. L. Poulton
610 Pennridge Road. HEmlock 1-1571

MIAMI 38, FLA.: Hal Moore
279 N. E. 79th Street. PLaza 8-5516

Rep. by McDonald-Thompson in:

LOS ANGELES 5, CAL.: R. Teeter
3727 W. Sixth St., DUnkirk 7-5391

SAN FRANCISCO, CAL.: Cal Wood
625 Market St. YUkon 1-2245

DENVER 3, COLO.: Bob Heidersbach
620 Sherman Street. KEystone 4-4669

PORTLAND 4, ORE.: Fred Goetz
404 Times Bldg. CA 2-5146

DALLAS 19, TEXAS Parker Harris
2727 Oak Lawn Ave., LAkeside 7-1324

HOUSTON 6, TEXAS: F. Vickrey
Room 214, 3217 Montrose Blvd. JAckson 9-6711

SEATTLE 4, WASH.: H. Abney
1008 Western Ave. MA 3-3766

Frederick B. Grosse, Production Mgr.
New York 36, N. Y. 49 W. 45th St. Plaza 7-2370
Cable: "Lockmin"

Foreign Representatives

EUROPE except U.K. & Germany
John Ashcraft
67 Avenue des Champs Elysees, Paris, 8.

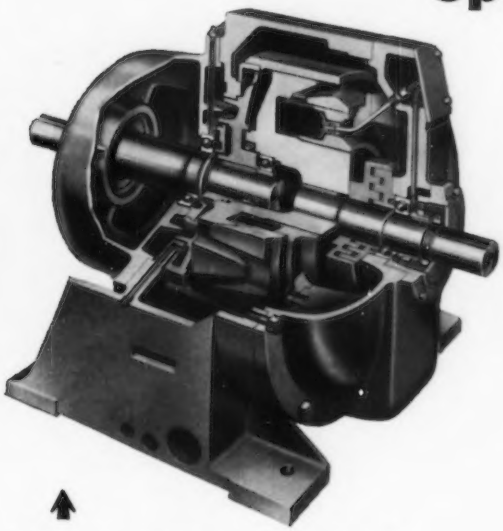
GERMANY
Herbert Morgenbesser
Kohlgarten, 3, Hamburg-FU. Phone 59-82-83

TOKYO, JAPAN
George C. Olcott, Business Manager,
International Media Representatives Ltd.,
Shadan Hojin, 14.2—Chome Marunouchi

UNITED KINGDOM
John Eckford-Prossor, Agent,
Stafford House, Norfolk St., Strand, London, W.C.2
Phone TEmple Bar 7397

HUGHES PRINTING CO.
EAST STROUDSBURG, PA.

The BEST Solution to Difficult Speed Control Problems—

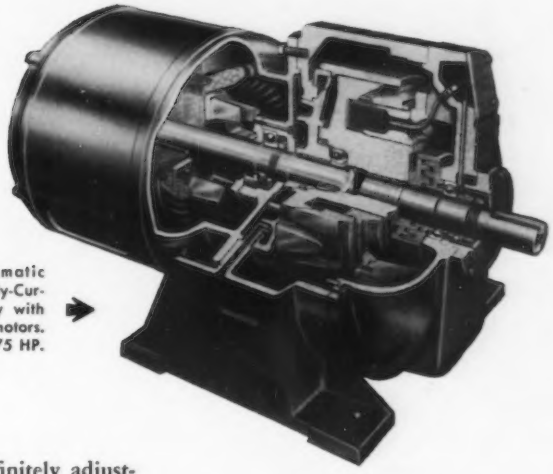


Dynamatic Liquid-Cooled Couplings provide infinitely adjustable speeds for nearly every application from 3 to 75 HP. Note the absence of slip rings, brushes, and commutators. Heavy-duty types with capacities up to 5,000 HP are also available.

EATON

DYNAMATIC®

LIQUID-COOLED EDDY-CURRENT COUPLINGS and DRIVES



"Dynaspede" Drives are Dynamatic Liquid-Cooled, Stationary-Field Eddy-Current Couplings mounted integrally with standard, D-flange, squirrel cage motors. Available in capacities from 3 to 75 HP.

Here's Why—

Dynamatic Liquid-Cooled Couplings and Drives provide infinitely adjustable speed from a constant speed source—or constant speed from a variable speed source. They operate on standard alternating current. Rotary power is transmitted through the coupling by an electromagnetic reaction between the driving and driven members of the unit—there is no mechanical contact of rotating members to cause wear and require adjustment or replacement.

A wide range of standard and special control features may be obtained from a remotely-mounted electronic control system. Infinite speed adjustment, constant speed control, on-off clutch control, torque limit, acceleration control, inching, and threading are a few of the many functions available. The addition of an eddy-current brake to standard couplings or drives provides smooth, cushioned stops and controlled deceleration.

Liquid-Cooled Dynamatic Couplings and Drives deliver more horsepower than other types of the same physical size, thus conserving space in a busy machine area. Efficient heat dissipation permits continued operation at low speeds, or stall with full load.

Completely enclosed, Dynamatic liquid-cooled units are protected from dust, dirt, and other atmospheric impurities. Dynamatic design involves no brushes or slip rings; there is no possibility of arcing. With simple modification these units can be made explosion-resistant for hazardous applications.

Infinitely Adjustable Speeds from AC Power

★

Full-Torque Starts

★

Wide Range of Control Functions

★

No Slip Rings, Brushes or Commutators

★

Completely Enclosed Design

★

Low-Cost Maintenance

Send for Our New Illustrated Bulletin.

EATON MANUFACTURING COMPANY

DYNAMATIC DIVISION

3307 FOURTEENTH AVENUE • KENOSHA, WISCONSIN

Your key to
hospitality
from **Staley's**
during the
Annual TAPPI Meeting

A. E. Staley Mfg. Co., Decatur, Ill.

BRANCH OFFICES: ATLANTA BOSTON CHICAGO CLEVELAND KANSAS CITY
NEW YORK PHILADELPHIA SAN FRANCISCO ST. LOUIS